BY ORDER OF THE CHIEF,
NATIONAL GUARD BUREAU

AIR FORCE INSTRUCTION 21-101

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AEROSPACE EQUIPMENT MAINTENANCE MANAGEMENT

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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Air Force Instruction **(AFI) 21-101**, *Aerospace Equipment Maintenance Management*, 1 June 2004, is supplemented as follows. This supplement has been approved by Headquarters, United States Air Force, Directorate of Maintenance/Maintenance Management Division (HQ USAF/ILMM) and clarifies Aerospace Equipment Maintenance Management for all Air National Guard (ANG) flying units. The ANG is organized differently from the USAF primarily due to manning constraints. All ANG flying units are organized with an Aircraft / Helicopter Maintenance Squadron (AMXS) and a Maintenance Squadron (MXS) comprising of an Equipment Maintenance Flight (EMF) and a Component Maintenance Flight (CMF), therefore, throughout this instruction there will be several organizational differences. As an example, the ANG AMXS does not have specialists in Mobility Air Forces (MAF) ANG units and limited specialist support in Combat Air Forces (CAF) ANG units. Specialists are normally dispatched from the back shops through the Maintenance Operations Center (MOC). Additionally, the ANG typically has only one person for Plans, Scheduling and Documentation (PS&D) and are centrally located in the Maintenance Operations Flight (MOF) instead of the AMXS. Refer to **Figure 1.3. (Added)**, and **Figure 1.4. (Added)**, for typical CAF and MAF organizational structure in ANG units. This instruction applies to all Air National Guard's organizations and personnel during non-federalized periods that maintain aircraft, aircraft systems, equipment, support equipment, and components regardless of AFSC and is applicable during all technician and military duty periods. It is applicable to both the Maintenance and Operations Groups. Local managers must effectively use their resources to ensure successful mission accomplishment. Managers may use any maintenance management procedure not specifically prohibited by this instruction, other maintenance publications, or technical orders. Units must publish either a single supplement and/or OIs for local policies mandated by the AFI and this supplement. HQ USAF/ILMM with coordination of ANG Logistics Policies and Procedures (ANG/LGMM) shall be the final approving authority for all deviations to established maintenance practices. Waivers may be requested via e-mail, message, or letter to ANG/LGMM. At unit level, the Maintenance Group Commander (MXG/CC) or designated representative is responsible for all matters affecting maintenance. This instruction recognizes that command

authority is exercised by the State Adjutants General. The National Guard Bureau (NGB) provides policy and management guidance.

SUMMARY OF REVISIONS

This document is substantially revised and must be completely reviewed.

This publication is a total rewrite of ANGI 21-101, which has become a supplement to AFI 21-101.

1.1. Units shall contact ANG/LGMM for waivers to this publication. The ANG Aircraft Maintenance Division (ANG/LGM) sets management policy for all maintainers within the ANG.

1.6. Units shall contact ANG/LGMM for unresolved technical order issues.

1.6.2.1. The 162nd Fighter Wing (FW) shall use United Arab Emirates (UAE) Form 22 for UAE F-16 block 60 aircraft. Routing shall be determined between the 162nd FW and Lockheed Martin (LM) Aerospace. Also send an informational copy to Central Technical Order Control Unit (CTOCU).

1.6.3. The Single Manager shall be LM Aero for UAE F-16 block 60 aircraft.

1.9. Forward the modification proposal on an AF IMT 1067, *Modification Proposal, or approved Research, Development, Test and Evaluation (RDT&E) process form*, according to AFI 63-1101, and AFI 10-601, to the ANG/LGM focal point. QA submits modification proposals; tracks unit concerns being worked by higher headquarters, and ensures proper implementation of modification directives and/or TCTOs. LM Aero shall provide configuration control and process modification proposals for UAE F-16 block 60 aircraft.

1.9.1.1. To install T-1 modifications on more than five systems requires coordination through ANG/LGM, owning single manager, and Air Logistics Center Commander (ALC/CC), then HQ USAF/ILM approval. LM Aero shall be the Configuration Review Board for UAE F-16 block 60 aircraft to install T-1 modifications. The 162nd FW shall submit and coordinate the proposal to LM Aero for approval.

1.9.2. LM Aero shall be the Configuration Review Board for UAE F-16 block 60 aircraft.

1.9.11. 162nd FW Safety modifications shall not be accomplished on UAE F-16 block 60 aircraft without coordination with ANG Director of Logistics (ANG/LG), ANG Director of Operations (ANG/XO), ANG Flight Safety (ANG/XOS) and LM Aero.

1.10.3.8. Aircraft that have not flown within 10 days after being gained from depot possession (in "D/B-Status" codes) will not be considered Hanger Queen and will not be reported as such.

1.11. Units shall contact ANG/LGMM for unresolved support agreement issues.

1.12.1. Quality Assurance shall coordinate the review of the unit supplements/OIs with the Office of Collateral Responsibility (OCR) to ensure the instructions are technically accurate, complete, pertinent, and consistent with AF and ANG policy. Unit supplements/OIs must be reviewed annually. Throughout this publication, supplements may be used for an OI.

1.14. The 162nd FW shall use Automated Logistics Management System (ALMS) for UAE F-16 block 60 aircraft. ALMS shall be considered a MIS. The 162nd FW shall develop local procedures in an OI/Sup for deployed aircraft.

1.16. Units shall submit waiver requests through the ANG/LGMM.

1.17. For the purpose of this instruction, in units where there is not an Operations Group Commander or Maintenance Group Commander responsible for maintenance, the applicable group commander or director of maintenance must be the maintenance authority, as depicted by the wing's organizational structure, and must ensure compliance with all responsibilities in this instruction. Also for the purpose of this instruction the term "civilian equivalent" does not apply. Other differences between the USAF and a typical ANG unit are:

Accessory Flight = Accessory Element

Aircraft Maintenance Unit = Squadron or Aircraft Maintenance Flight

AGE Flight = AGE Element

Armament Systems Flight = Armament Section

Avionics Flight = Avionics Element

Fabrication Flight = Fabrication Element

Flight Chief = Maintenance Supervisor

Maintenance Flight = Maintenance Element

Maintenance Operations Squadron = Maintenance Operations Flight

Maintenance Operations = Maintenance Supervisor

Maintenance Operations Office = Flight OIC/Squadron Maintenance Officer (SMO)
Maintenance Superintendent = Maintenance Supervisor

Maintenance Training Flight = Maintenance Training

MAJCOM = Air National Guard

Munitions Flight = Munitions Element

Propulsion Flight= Propulsion Element

Section Chief = Element/ Workcenter Supervisor

Squadron Production Supervisor (Squadron Pro Super) = Production Supervisor (Pro Super)

Weapons Maintenance Element = Armament Section

1.17.1. (Added) ANG maintenance activities are organized by the various organizational structure codes on the manning document for that particular weapon or support system. See **Figure 1.3. (Added)**, and **Figure 1.4. (Added)** Workcenters are staffed consistent with mission requirements, workload, and available personnel. Units are encouraged to consolidate functions when warranted to streamline operations and enhance mission readiness. During non-federalized operations, ANG units are not manned or structured to adopt all gaining command maintenance management policies and procedures. When the gaining command utilizes a different maintenance management program, the unit MXG/CC ensures management personnel are aware of that program to permit the unit to be incorporated into the gaining command management structure upon federalization.

Figure 1.3. (Added) ANG CAF Maintenance Group Organization. ***NOTE:*** **Typical but not all inclusive.**

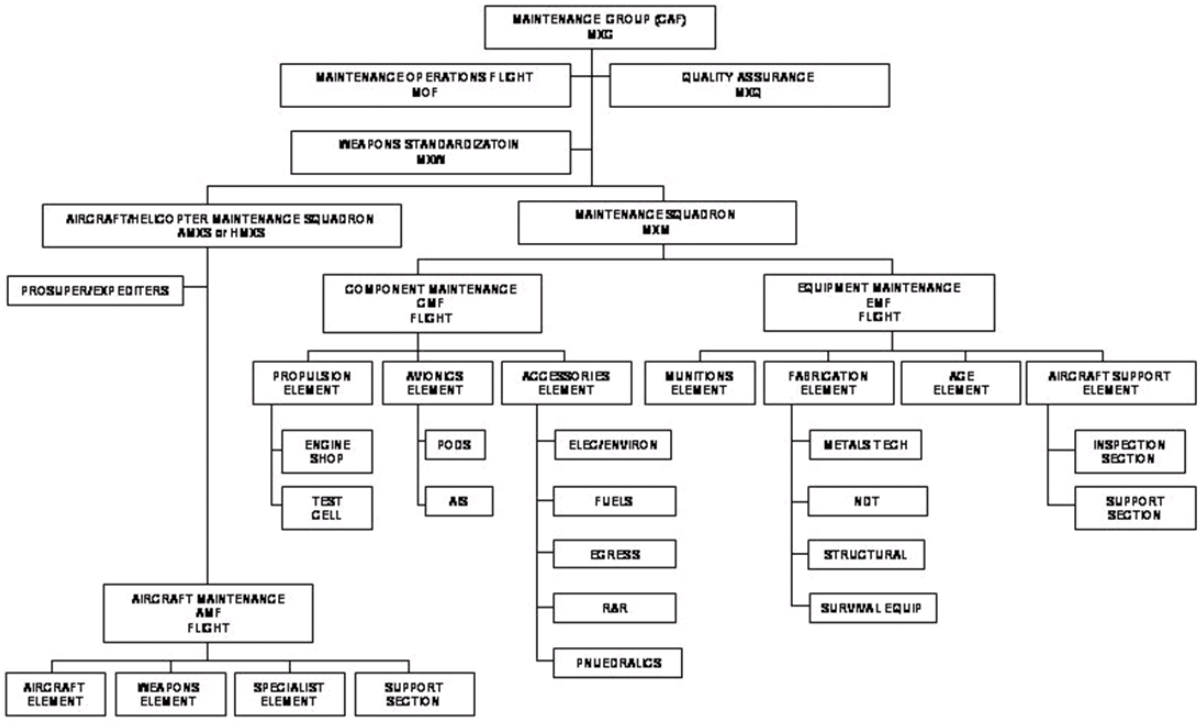
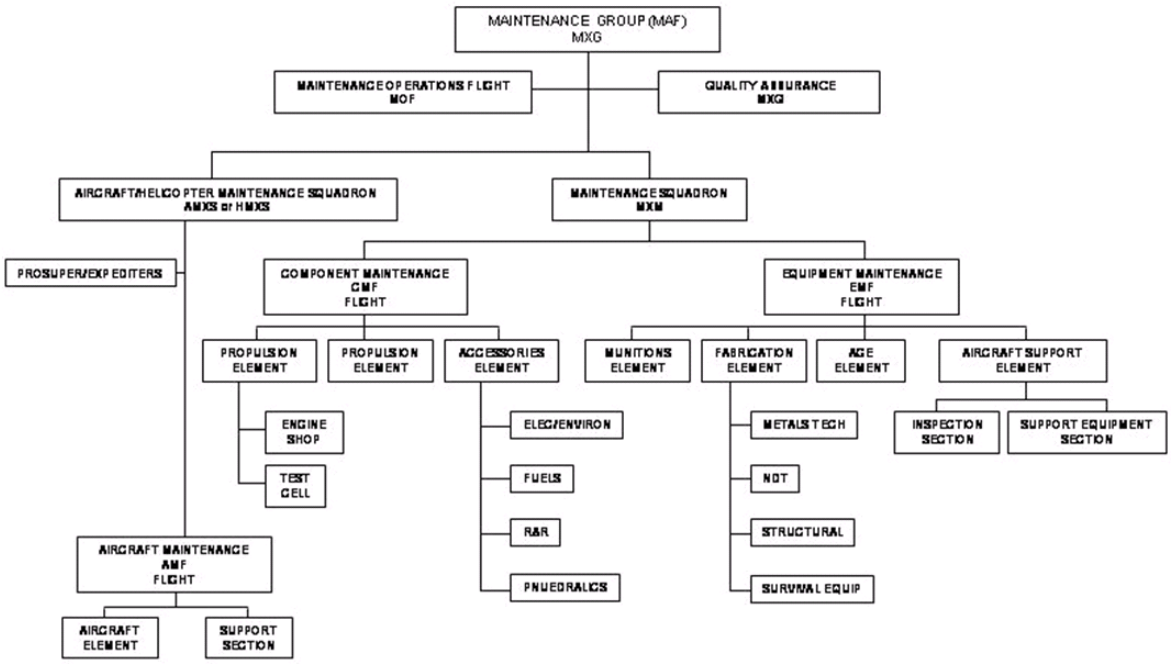


Figure 1.4. (Added) ANG MAF Aircraft Maintenance Group Organization. *NOTE:* Typical but not all inclusive.



1.19.2. Address questions concerning CUT to ANG/LGMM. Important considerations for units include:

1.19.2.1. (Added) Identifying the type of tasks for CUT and determining which individuals receive that training.

1.19.2.2. (Added) Providing CUT so that personnel can work with little or no assistance.

1.19.2.3. (Added) Ensuring CUT does not interfere with skill level upgrade training or weapons system qualification training.

1.19.3. Except the 116th Air Control Wing (ACW) active duty personnel.

1.22.3.1. (Added) A configuration of live and inert (to include training and practice) bombs must not be loaded in/on the same dispenser, rack or flown on an aircraft load together. Any deviation or request for waiver to this policy shall be requested by official message and coordinated and approved by ANG Munitions Division, ANG Weapons Safety, and ANG Operations Weapons and Tactics/Training Division.

1.22.3.2. (Added) Command Missile Policy. To maintain our WRM missile reliability and availability, the following applies (except AGM-69/86/129):

1.22.3.2.1. (Added) In addition to the Air Force Munitions Policy requirements, the Command Missile Policy applies to all versions of Tactical Air Missiles (i.e., AIM-7, AIM-9, AGMs, AGM-142 (HAVE NAP), and AIM-120 (AMRAAM), AGM-84 (HARPOON). Containerized/not containerized missiles are not used for peacetime loads, SGOs, exercises, or inspections.

1.22.3.2.2. (Added) The total number of ready missiles (Category C) for these units may be one SCL per Primary Aerospace Vehicle (Aircraft) Authorized (PAA). Units with continuous active alert commitments

(includes home station and detachments) may add one standard missile load for each primary alert aircraft to their total. Missiles stored at detachments are placed in dead/AURC storage (Category A).

1.22.3.2.3. (Added) Tactical missiles may be flown for OPlan tasking, Noble Eagle (other Continental United States NORAD (CONR) taskings), air defense alert, WSEP, and OT&E Programs.

1.22.3.2.3.1. (Added) Live missiles of one type and inert versions (or electronic simulators) of others may be loaded on aircraft participating at WSEP/Combat Archer, as applicable.

1.22.3.2.4. (Added) Load crew training missiles must mirror the parent tactical missile.

1.22.3.2.5. (Added) Missiles must not be electronically verified during or after IG, ORI, or local exercises/SGOs on the field test set solely to determine missile reliability/serviceability.

1.22.3.2.6. (Added) A dedicated e-mail address must be established for units utilizing the TMRS program IAW applicable Technical Orders.

1.22.3.2.7. (Added) TAC Ferrying of Alert AUR missiles:

1.22.3.2.7.1. (Added) For TAC ferry flights of a full AUR AIM-9 the umbilical connector must be connected. The Guidance Control System (GCS) requires power to the seeker head to keep it stabilized due to the internal gyros even if other parts of the missile are identified as unserviceable.

1.22.3.2.7.2. (Added) For TAC ferry flight of AIM-7. The AIM-7 umbilical secured and shorted to prevent power to the missile.

1.22.3.2.7.3. (Added) Units requesting to TAC Ferry missile shall contact ANG Aircraft Maintenance Division Weapons Branch (ANG/LGMW) with missile serial numbers and the date of event.

1.22.3.2.7.4. (Added) Aircraft transporting live missiles must not engage in Air-to-Air or Air-to-Ground training.

1.22.3.2.7.5. (Added) Partial configurations have not been approved by SEEK EAGLE for F-16 and F-15 units. Units flying CATM-120 must have wings and fins attached.

1.22.3.2.7.6. (Added) Deicing fluid, fuel, hydraulic fluid, etc., is not inherently damaging to the missile, however, these fluids should not be sprayed directly on the missiles, especially avoiding the wing holes, aft end, and harness cover. If the missile is contaminated with any of these fluids the missile should be cleaned IAW the appropriate TO. Missiles do not need to be downloaded prior to deicing.

1.25. The 162nd FW shall coordinate UAE F-16 block 60 issues with LM Aero.

1.27.1. Not Applicable (N/A) to the ANG. The following only applies to the ANG: As a minimum, UCML/TTMLs must be updated annually to identify all munitions tasked and/or required to support test/training or OPlans and DOC statements. Additional munitions may be included on the UCML/TTML as SM or LM munitions if required by the unit or designated by ANG/LGM to support test, training, or deployment. The UCML/TTML is the base document for aircrew and load crew training munitions forecasts, authorizations and operations.

1.27.2. Include Operations Group Commander (OG/CC) before sending it to ANG/LGM.

1.28. The 162nd FW shall coordinate with LM Aero for depot level assistance for the UAE F-16 block 60 aircraft.

1.29. (Added) **NGB Technical Support, Single Point of Contact (SPOC), and Advisory Committees/ Teams.** When established, the purpose of the SPOC, advisory committee/team is to augment and advise ANG/LGM staff personnel and is also responsible to the respective weapon system or Logistics council. A committee/team must be sanctioned by the ANG in order for it to be recognized. The need to form a team or SPOC shall be initiated by ANG/LGM or by the various weapon system councils. Appointment to the team must be by recommendation through the individuals MXG/CC to the weapons system council president for approval and to the respective ANG functional OPR for appointment. Team/SPOC members may be removed by recommendations from the respective weapon system council to the ANG/LGM OPR for approval. Notification of the team/SPOC members to the field must be by message or e-mail. Duties of the team/SPOC include, but are not limited to:

1.29.1. (Added) Act as the functional expert for specific aircraft maintenance related issues.

1.29.2. (Added) Coordinate with all other agencies/units as required to establish a consensus on issues.

1.29.3. (Added) Provide technical guidance on specific areas of expertise.

1.29.4. (Added) Provide technical assistance to the ANG and respective weapon system council for policy creation.

1.29.5. (Added) Execute specific technical tasks as assigned IAW existing ANG policy.

1.29.6. (Added) Attend meetings pertaining to assigned subjects.

1.29.7. (Added) Maintain close communications with ANG functional OPR.

1.29.8. (Added) Provide trip reports, point papers, background papers, and general information when required.

1.29.9. (Added) Provide updates to units.

1.29.10. (Added) Generate informational/tasking message, as required, after coordination with ANG functional OPR.

1.29.11. (Added) SPOCs shall not set policy.

1.29.12. (Added) TODO SPOC shall be approved/removed by QA SPOC, but only after coordination with the Command Functional at ANG/LGMM and attaining the consensus of the other QA Superintendents and TODOs within the respective weapons system.

2.3.1.2. N/A to the ANG. The following only applies to the ANG: Ensure that maintenance training throughout the respective group is accomplished according to the published (monthly) training plan and the awaiting and overdue backlogs are kept to a minimum. The MXG/CC exercises oversight authority for all maintenance training.

2.3.1.5. N/A to the ANG. The following only applies to the ANG: Rotate personnel, within ANG manpower directives, to enhance mission and develop individual experience and knowledge.

2.3.1.23. And IAW ANGI 21-105, *Corrosion Control, Nondestructive Inspection, and Oil Analysis Programs*.

2.3.1.27. The 162nd FW shall coordinate with LM Aero for depot level assistance for the UAE F-16 block 60 aircraft.

2.3.1.28. N/A to the ANG. The following only applies to the ANG: Review the wing's proposed annual maintenance and flying hour/test programs prior to submission to the ANG.

2.3.1.36. A DIT is required for all ANG flying units.

2.3.1.71. Ensures training requests identified on AF IMT 898, *Field Training Requirements Scheduling Document*, are coordinated and approved.

2.3.1.77. N/A to the ANG except for the 116th ACW active duty personnel.

2.3.1.85. N/A to the ANG. The following only applies to the ANG: TMDE Collection Point. Ensure Maintenance Group (MXG) activities serviced by an off-base PMEL establish a TMDE collection point. The collection point coordinator is the single point-of-contact between the MXG work centers and the servicing TMDE Flight. MXG/CC shall designate the collection point primary and alternate coordinator in writing.

2.3.1.87. (Added) Monitor the assignment and use of all maintenance personnel to ensure equitable distribution of skilled people. Ensure all personnel assigned to Maintenance are used to accomplish critical wartime tasks before releasing them for non-maintenance duties.

2.3.1.88. (Added) Sign the SCR.

2.3.1.89. (Added) Assign a manager for the engine-run, qualification/certification program IAW AFI 11-218.

2.3.1.90. (Added) Appoint, when required, a WWM. The MXG/CC appoints a WWM, who is the most qualified Aircraft Armament Systems (2W1XX) and is the functional manager for AFSC 2W1X1. In cases where the function is not represented by full time personnel, the MXG/CC shall appoint a full time representative. In cases where a 2W100 Chief Master Sergeant is not assigned to the Maintenance Group, the MXG/CC may request a waiver for the most qualified 2W1 SMSgt to serve as the WWM for up to 24 months. Submit waivers to ANG/LGMW for approval.

2.3.1.91. (Added) Ensure that no maintenance is performed by personnel who are not properly trained and certified, unless under the direct supervision of a trainer or certifier.

2.3.1.92. (Added) Ensure that anyone performing maintenance utilizes an AF IMT 623, *Individual Training Record Folder*, and Career Field Education and Training Plan (CFETP) or automated training products to provide a record of qualification, regardless of military rank or civilian grade.

2.3.1.93. (Added) Ensure that QA has access to Joint Engineering Data Management Information and Control System (JEDMICS), and a primary and that an alternate POC has been assigned and identified to the ANG Program Manager for coordination in accordance with ANG Policy Memorandum 21-407.

2.3.1.94. (Added) Ensure an OI has been established for controlling, security, distribution, and destruction of engineering data in all media forms.

2.3.1.95. (Added) May authorize the use of non-2W1X1 personnel, for alert detachments only, as load crewmembers but not load crew chiefs.

2.3.1.96. (Added) The MXG/CC shall ensure oversight is provided for microcomputer systems management for the maintenance complex. The MXG/CC may assign the following tasks as an additional duty:

2.3.1.96.1. (Added) Control and validation of microcomputer equipment requests submitted for microcomputer equipment through the automated system.

2.3.1.96.2. (Added) Functional Server Administrator (FSA) for the LAN.

2.3.1.96.3. (Added) Computer Systems Manager (CSM).

2.3.1.96.4. (Added) Custodian for ADPE.

2.3.1.97. (Added) Enable use of AFKS formerly known as Enterprise Data Warehouse (EDW).

2.3.1.98. (Added) Establish effective sortie generation operations procedures IAW Chapter 18.28. if applicable.

2.3.1.99. (Added) Ensure that the unit has implemented an effective Corrosion Prevention and Control Program IAW ANGI 21-105.

2.3.1.99.1. (Added) Publish an OI outlining local policies and procedures.

2.3.1.99.2. (Added) Designate a SNCO with appropriate technical background and corrosion control experience to serve as the unit corrosion prevention and control manager.

2.3.1.100. (Added) Establish Ramp inspection program IAW Chapter 18 if tasked.

2.3.1.101. (Added) Ensures an effective AIP IAW Paragraph 18.25. Appoints an officer or Non-Commissioned Officer (NCO) as the AIP project officer, and ensures effective measures are in place to capture data.

2.3.1.102. (Added) Establish a vehicle control program for their group.

2.3.2. N/A to the ANG except the 116th ACW. All subparagraphs of **2.3.2.**, are also N/A.

2.3.3. N/A to the ANG except the 116th ACW. All subparagraphs of **2.3.3.**, are also N/A.

2.4. **Squadron/Flight Commander Responsibilities.** N/A to the ANG. The following only applies to the ANG: The commander is responsible to the MXG/CC and may be assisted by one or more individuals for overall squadron/flight management. They play a pivotal role in the unit's effort to improve maintenance quality. They must ensure supervisors and personnel participate in reviewing maintenance processes. Without aggressive involvement from maintenance supervision, the unit MSEP shall not be effective. The Squadron/Flight Commander:

2.4.12. N/A to the ANG. The following only applies to the ANG: Complies with the group vehicle program as required by AFI 24-301 and designates a squadron vehicle control officer/NCO, if required.

2.4.18. N/A to the ANG.

2.4.22. (Added) Designates a Unit Environmental Coordinator (UEC) to work environmental coordination, implementation, and compliance with the installation MXG/OG Environmental Coordinator, the installation environmental flight, and the installation Hazardous Material Management Process (HMMP) team for ESOH issues.

2.4.23. (Added) Participates in quarterly QA reviews.

2.4.24. (Added) Has a working knowledge of MIS (Maintenance Information System) and ensures its use.

2.4.25. (Added) Analyzes unit manning authorizations and the individuals assigned to ensure an adequate balance of career fields, task certified personnel, and certified personnel listed on the SCR exist to meet mission requirements.

2.4.26. (Added) Endorses adding an individual to the SCR and forwards to the QA Supt. for final review prior to submission to the MXG/CC for approval and inclusion on the SCR (**Exception**: the 116th ACW squadron commanders have approval for inclusion on the SCR).

2.4.27. (Added) Maintains a current copy of the unit personnel manpower roster (UPMR). Maintains a record of personnel actions and verifies entry of approved actions into the personnel data subsystem.

2.5.5. Maintains a copy of the SCR for the flight.

2.5.7. Ensure aircraft status is accurately reflected in both the maintenance forms and the MIS.

2.5.8. N/A to the ANG. The following only applies to the ANG: Monitors cannibalization actions.

2.5.10. And IAW ANGI 21-105.

2.5.15. N/A to the ANG. The following only applies to the ANG: Ensures personnel are qualified to support SGO, concurrent servicing operations, and hot refueling operations (as applicable).

2.5.17. N/A to the ANG. The following only applies to the ANG: Supports aircrew debriefing procedures.

2.5.20. N/A to the ANG. The following only applies to the ANG: Ensures the corrosion control program is implemented and properly managed.

2.5.21. N/A to the ANG. The following only applies to the ANG: Complies with Base OI for hot brakes incidents. Establishes procedures to effectively respond to hot brakes incidents as applicable.

2.5.23. N/A to the ANG. The following only applies to the ANG: Designates Supervisors. The best-qualified people are selected within the constraints of AFMAN 36-2108. **EXCEPTION**: Munitions Element supervisors shall be appointed IAW AFI 21-201.

2.5.26. N/A to the ANG (**Exception**: Applicable to the 116th ACW active duty personnel).

2.5.27. N/A to the ANG (**Exception**: Applicable to the 116th ACW active duty personnel).

2.5.30.1. N/A to the ANG. The following only applies to the ANG: Review and support quarterly WLT schedule.

2.5.34. N/A to the ANG. The following only applies to the ANG: Manages the responsibilities in the FOD and DOP program IAW Chapter 18 of this instruction.

2.5.36. N/A to the ANG. The following only applies to the ANG: Monitors environmental protection guidance. Ensures compliance with AFPD 90-8 and ensures compliance with Air Force 32-7XXX series environmental directives and applicable environmental protection / compliance guidance.

2.5.38. N/A to the ANG. The following only applies to the ANG: Complies with procedures to control repair cycle assets IAW TO 00-20-3.

2.5.40. The 162nd FW shall report deficiencies to LM Aero for UAE F-16 block 60 aircraft.

2.5.47. N/A to the ANG (**Exception**: Applicable for the 116th ACW active duty personnel).

2.5.49. N/A to the ANG (**Exception**: Applicable for the 116th ACW active duty personnel).

2.5.50. N/A to the ANG. The following only applies to the ANG: Complies with the group program for control of assigned LMRs is established IAW Chapter 18 of this publication.

2.5.56. N/A to the ANG. The following only applies to the ANG: Complies with procedures to ensure accountability of GITA.

2.5.57. (Added) Ensures unit SGO training requirements are supported and consistent with the unit's wartime tasking IAW Chapter 18.28.

2.5.58. (Added) Reviews and consolidates monthly maintenance plan inputs from flights/sections and forwards to PS&D.

2.5.59. (Added) Ensures AME and SPRAM accountability and control requirements are met IAW AFI 21-103 and AFMAN 23-110.

2.5.60. (Added) Coordinates the work shift schedule with the Production Supervisor and maintenance supervision to ensure sufficient people are available to support the mission.

2.5.61. (Added) Ensures operator inspections and user servicing requirements are accomplished on all assigned support equipment IAW TO 00-20-1.

2.5.62. (Added) Approves requirements for bench stocks and provide guidance as to the type, location and use by one or more sections. Spot check bench stocks to evaluate adequacy, supply discipline, and housekeeping.

2.5.63. (Added) Ensures reparable parts are promptly processed through repair channels within the required time frame. Reference AFMAN 23-110.

2.5.64. (Added) Monitors shift manpower distribution, including distribution of supervision, and make necessary adjustments. Imbalances between authorizations and the number of personnel assigned, or between authorized and assigned skill levels or grades, are identified to Squadron/flight commander.

2.5.65. (Added) Ensures personnel are identified to meet deployment tasking according to the unit's DOC statement IAW AFI 10-403, AFI -10-215, and AFMAN 10-401.

2.5.66. (Added) Monitors tool and equipment management and special tool needs IAW Chapter 13 of this instruction. Also enforces procedures for control, storage, and management of AME, dash 21 equipment, and maintenance, safety, and MSPE according to AFI 21-103.

2.5.67. (Added) Ensures elements maintain records of inspection, lubrication, and maintenance of industrial equipment according to the appropriate general maintenance manuals and TOs on AFTO Form 244, *Industrial/Support Equipment Record*, or AF IMT 2411, *Inspection Document*.

2.5.68. (Added) Ensures training requirements are executed in support of the established training plan and individual AFSC CFETP. Ensure all personnel complete the Shop Level Pollution Prevention (P2) training program and the ESOH training requirements as applicable.

2.5.69. (Added) Ensures compliance with TO 33K-1-100, TMDE Calibration Interval Technical Order and Work Unit Code Reference Guide, applicable calibration measurement summaries (CMS), and TO 00-20-14, in the use, care, handling, transportation, calibration of TMDE and scheduled for calibration IAW AFCSM 21-566, *Inspection and Time Change, Software User Manual.*

2.5.70. (Added) Consolidates section inputs for items received in LRS requiring functional check, operational programming, or calibration. Submit the listing to LRS inspection section.

2.5.71. (Added) Coordinates all new AGE requirements through the AGE element to ensure support capability and eliminate unnecessary duplication of equipment.

2.5.72. (Added) Ensures bench stock and tool/equipment storage areas are managed appropriately IAW Chapter 8 and 13 of this instruction.

2.5.73. (Added) Ensures general housekeeping, safety, security and environmental control and AFOSH standards are followed.

2.5.74. (Added) Establishes a safety program designed specifically for mishap prevention and the identification and abatement of hazards associated with the workcenter IAW Chapter 9.

2.5.75. (Added) Monitors and ensures environmental health physicals and respirator training, initial and recurring requirements, are accomplished when required for assigned personnel (refer to AFOSH STDs).

2.5.76. (Added) Monitors and ensures AF IMT 55, *Employee Safety and Health Record*, is documented IAW AFI 91-301.

2.5.77. (Added) Administers the squadron safety program in the flight. Ensure all personnel obtain the required safety training. Ensure safety information is available and personnel in hazardous areas are briefed about the dangers. Identify requirements to the bioenvironmental engineers; ensuring facilities meet Air Force industrial environmental standards IAW AFI 91-302.

2.5.78. (Added) Evaluates maintenance quality, the qualifications of personnel, and training deficiencies by working with element supervisors and by observing personnel performance. Review MSEP results and trends, target areas for improvement, and also recognize quality performers.

2.5.79. (Added) Develops training requirements, evaluates skills, aptitudes and proficiency of assigned people. Ensures CUT requirements are identified as required by the unit mission. Ensures CUT does not interfere with upgrade training or qualification training of individuals not qualified on the assigned weapon system.

2.5.80. (Added) Reviews deferred maintenance weekly for accuracy and to determine if appropriate and timely actions are being taken. Use MIS screens/Automated Records Check and coordinates with the Production Supervisor for accomplishment.

2.5.81. (Added) Manages administrative details, including personnel performance reports, additional duties, training, appointments, etc.

2.5.82. (Added) Enforces procedures for managing lockout and tag-out situations (IAW Chapter 9 of this publication and AFOSH STD 91-45).

2.5.83. (Added) Ensures supervision is aware of any critical shortages of personnel, aircraft, equipment, or components.

2.5.84. (Added) Ensures review of new, revised, or changed publications/technical orders and that personnel are informed of any significant changes. Decides if new or changed publications affect the qualifications of personnel. Ensures workcenter publications are current and required publications are available to meet workcenter needs.

2.5.85. (Added) Solicits, actively, solicit inputs and promotes the product improvement and R&M programs.

2.5.86. (Added) Ensures only designated personnel listed on SCR are verifying Urgency of Need (UND) 1A and JA requirements.

2.5.87. (Added) Ensures compliance with precious metals recovery program, as applicable, in accordance with AFMAN 23-110 and TO 00-25-113, *Conservation and Segregation of Critical Alloys and Precious Metal Bearing Parts and Scrap.* Maintain and dispose of records according to the Air Force Records Disposition Schedule, accessible on-line: (**https://webrims.amc.af.mil**).

2.5.88. (Added) Ensure personnel know specific disaster control duties and provisions of AFMAN 32-4004 and AFI 10-229 with regard to the movement of aircraft, support equipment, and evacuation of flightline personnel.

2.5.89. (Added) Ensures assigned personnel have access to the equipment and resources necessary to perform their job.

2.5.90. (Added) Ensures organizational compliance with all federal, state, and local laws pertaining to environmental regulation and pollution prevention. Enforce local environmental protection guidance and monitor compliance. Supervisors must work closely with the base environmental office to identify specific local requirements.

2.6. **N/A to the ANG.** (except for the 116 ACW). All subparagraphs of **2.6.**, are also N/A.

2.7. **Element/Workcenter Supervisor** : N/A to the ANG. The following only applies to the ANG: The element/workcenter supervisor is responsible for the leadership, supervision, and training of assigned personnel. The element/workcenter supervisor is a first-line manager and supervisor of maintenance production and, as such, is the technical authority and advisor in that area. Depending upon the organizational structure of the assigned weapon system, it may be necessary to assign the following responsibilities to one or more supervisors/small shop chiefs as deemed most appropriate. The element/workcenter supervisor accomplishes the following:

2.7.15. N/A to the ANG. The following only applies to the ANG: Determines maintenance tasks requiring IPI. Forward IPI listing through maintenance supervision for consolidation.

2.7.17.7. For G081 use screen 67137.

2.7.23. Ensure TMDE that is overdue calibration, is not used without ANG/LGMM approval for calibration extension.

2.7.25. N/A to the ANG. The following only applies to the ANG: Participates in the Bad Actor Program according to TO 00-35D-54.

2.7.27. (Added) Spot checks bench stock and operating stocks for authorized levels and enforce supply discipline. Chapter 8 of this instruction prescribes procedures for bench stock management.

2.7.28. (Added) Ensures that workcenter specific responsibilities outlined in ANGI 21-105 are followed.

2.7.29. (Added) Maintains master equipment ID number lists when required.

2.7.30. (Added) Ensures the training of and annual recertifying of crash recovery team personnel.

2.7.31. (Added) Maintains historical records. Element supervisors maintain AFTO Forms 95, *Significant Historical Data*, on selected, significantly repairable, serialized components for which historical failure data would enhance repair. Historical records are mandatory for SPRAM LRUs, and items asterisked in weapons system dash -6 manuals. Historical records should be automated (TO 00-20-1).

2.7.32. (Added) Maintains a current copy of the Qualified Products Listing (QPL). The QPL identifies qualified products (i.e., cleaners, paints, etc.) within a particular Mil-spec and are the only approved materials for use on ANG aircraft, subsystems and support equipment. Products not listed on the QPL are unauthorized and must not be used. The QPL can be located at the following Air Force Corrosion Prevention and Control Office web site: (**http://www.afcpo.com**).

2.7.33. (Added) Notifies QA prior to start of the first TCTO accomplishment.

2.8. **Production Supervisor (Pro Super).** N/A to the ANG. The following only applies to the ANG: The Production Supervisor directs the overall maintenance effort of their unit. The Pro Super shall be a SNCO. At local option, Expediter and Production Supervisor duties may be combined provided all duties of both functions are performed. The Pro Super must:

2.8.15. (Added) Direct cannibalization on assigned aircraft and coordinates the action with the MOC prior to cannibalization actions. MOC must coordinate cannibalizations actions with LRS.

2.9. **Expediter:** N/A to the ANG. The following only applies to the ANG: Expediters lead people and manage resources to accomplish scheduled and unscheduled maintenance. Expediters work with the Pro Super and MOC in generating aircraft, ensuring maintenance accomplishment and sortie production by managing, controlling and directing allocated resources. At local option, Expediter and Production Supervisor duties may be combined; provided all duties of both functions are performed. Waivers to this paragraph shall be directed to ANG/LGMM. Expediter's responsibilities:

2.9.6. N/A to the ANG. The following only applies to the ANG: Ensures parts are ordered using appropriate priorities, document numbers are relayed to the Pro Super and MOC, and picked up expeditiously from the Flight line Dedicated Support Element (FDSE). Expeditors may verify MICAP requisitions.

2.9.10. Also notify MOC.

2.9.15. N/A to the ANG. The following only applies to the ANG: Notifies MOC and Pro Super when aircraft are ready for ER, flight (crew ready) and crew show, engine start, taxi, block-in, and aircraft configuration (e.g., fuel, munitions, cargo).

2.9.23. (Added) Tracks all discrepancies identified during "Red Ball" maintenance and takes proper follow-up action.

3.1. **General.** N/A to the ANG. The following only applies to the ANG: Services, inspects, maintains, launches, recovers assigned and transient aircraft (if applicable), and ensures all mobility requirements are met. There is normally one AMXS/HMXS per each MDS aircraft, one Aircraft Maintenance Flight (AMF) for each assigned Operational Squadron (OS), and one Support Section for each AMXS/HMXS. **NOTE**: The terms and responsibilities associated with the sections identified in this chapter may differ or may be N/A to all units based on unit size, mission, and MDS assigned.

3.1.1. AMXS is responsible for developing EOR procedures, IAW Chapter 18 and MDS -6 requirements.

3.3. Flight OIC/SMO Responsibilities.

3.3.1. If applicable.

3.3.2. As applicable.

3.3.3. As applicable.

3.3.5. N/A to the ANG. The following only applies to the ANG: Executes a rotation plan (within ANG manpower guidelines) that balances grade, skill level and experience of AFSC 2A6X6 and 2A6X5, 2A6X1, 2A5X1 personnel between aircraft maintenance and back shop. Ensures personnel are rotated, as necessary, to enhance individual experience and knowledge.

3.3.6. N/A to the ANG (except for the 116th ACW active duty personnel).

3.3.7. Or electronic form containing the same information.

3.4. **The Aircraft Maintenance Flight (AMF).** N/A to the ANG. The following only applies to the ANG: AMF is responsible for servicing, inspecting, maintaining, launching, and recovering assigned aircraft, and ensures all mobility requirements are met. AMF may include the following sections: production, aircraft, and specialist.

3.5. **Maintenance Supervision Responsibilities.** N/A to the ANG. The following only applies to the ANG: Maintenance supervision is responsible for sortie generation and the management/supervision/ training of assigned personnel. Maintenance supervision allocates personnel and resources to the production effort. In addition to the common responsibilities in Chapter 2, the maintenance supervision:

3.5.5. If applicable.

3.5.6. (Added) Ensures that assigned positions are filled with qualified technicians.

3.5.7. (Added) Ensures all maintenance actions are documented in the MIS.

3.5.8. (Added) Reviews transcribed AFTO 781 series forms, and workcenter MIS data entries for the previous day, and all preceding non-duty days, for job accuracy and completeness (CAMS screen #100 and G081 screen 67137).

3.5.9. (Added) Monitors cannibalization (CANN) actions.

3.6. **Production Supervisor.** N/A to the ANG. The following only applies to the ANG: The Production Supervisor is responsible for squadron maintenance production. The MXG/CC may combine Production Supervisor and flightline expediter duties. Duties are outlined in Chapter 2.

3.8. **Maintenance Debrief.** N/A to the ANG. The following only applies to the ANG: The MXG/CC shall establish a debriefing function and the MOC normally has overall management responsibility. At the MXG/CC option, the AMXS may be given the responsibility for Debrief.

3.8.4. N/A to the ANG. The following only applies to the ANG: Discrepancies are sent to MOC either by automated or manual means. Assign status codes to aircraft according to AFI 21-103 and appropriate MESL. Debriefing personnel must thoroughly understand and use the MESL found in command supplements to AFI 21-103 or maintained on the ANG web site.

3.8.6. Ensure that aircraft utilization data recorded on the AFTO Form 781, *Aircrew/Mission Flight Data Document*, is entered into the MIS. The responsibility for inputting all flight data shall be locally determined.

3.8.9.1.1. Debriefers shall inform the Production Supervisor and expediter when a repeat/recur occurs.

3.8.9.1.2. (Added) Aircraft debriefing is necessary for all weapons or support systems, but is done differently depending on the complexity of the systems involved. Regardless of the debriefing option elected, procedures are set up to identify "Repeat/Recurring" discrepancies. As a minimum these procedures must limit the person who signs the “inspected by” block to a 7-skill level or higher.

3.8.9.1.3. (Added) A repeat discrepancy on an aircraft occurs on the next or attempted sortie after corrective action has been taken and the system or subsystem is used and indicates the same malfunction.

3.8.9.1.4. (Added) A recurring discrepancy on an aircraft occurs on the second through fourth sortie or attempted sortie after corrective action has been taken and the system or subsystem is used and indicates the same malfunction.

3.8.9.1.5. (Added) A corrective action occurs when parts are removed, replaced, repaired, or when any form of troubleshooting adjustment or cleaning of contacts is accomplished.

3.8.9.1.6. (Added) A discrepancy in the aircraft forms requesting an in-flight ops check does not negate the identification of a repeat/recur discrepancy if the malfunction returns.

3.8.17. (Added) Aircraft scheduled for turn-around sorties need not be debriefed if returned in code 1 or 2 status. However, debriefing is required, regardless of status, after the last flight of the day.

3.8.18. (Added) Ensure that there is emphasis of data collection during debriefing because of the financial impact of data lost during poor debriefing procedures.

3.8.19. (Added) During debriefing, debriefers are to remove the AF IMT 664, *Aircraft Fuels Documentation Log* from the forms binder, and return it to the aircrew. The aircrew is to deliver this form to their document control officer, according to AFI 23-202. If debriefers do not perform this function, then the Unit shall publish specific procedures outlining the delivery of the AF IMT 664 to the document control officer.

3.8.20. (Added) When debriefing battle damage, the recovery organization uses the following forms:

3.8.20.1. (Added) AFTO Form 97, *Aerospace Vehicle Battle Damage Repair Debrief/Assessment Record.*

3.8.20.2. (Added) AFTO Form 97A, *Aerospace Vehicle Battle Damage Repair Debrief/Assessment Record (Continuation Sheet).*

3.8.20.3. (Added) AFTO Form 781H, *Aerospace Vehicle Flight Status and Maintenance Document.*

3.8.20.4. (Added) AFTO Form 781A, *Maintenance Discrepancy and Work Document*, according to TO 1-1H-39.

3.8.21. (Added) When automated Maintenance Data Documentation (MDD) Systems, including the debriefing portion are available; data must be input using procedures outlined in the appropriate user manuals or directives. When automated systems are not available, alternate methods must be used, until the data can be input. To the greatest extent possible, all efforts must be made to relay data as soon as possible to the input location.

3.9. **Crew Chief Section.** N/A to the ANG. The following only applies to the ANG: The crew chief sections are the primary workcenters responsible for maintaining the assigned aircraft. Based on the number of aircraft and personnel assigned, MXG/CC's have the option to split into more than one crew chief section.

3.9.2. The above paragraph is only applicable to 116th ACW active duty personnel. The ANG crew chief must:

3.9.2.1. The above paragraph is only applicable to 116th ACW active duty personnel.

3.9.2.7. N/A to the ANG. The following only applies to the ANG: Ensure that helicopter crew chiefs perform vibration analysis in flight.

3.9.2.9. N/A to the ANG. The following only applies to the ANG: Manage and supervise maintenance on their aircraft and accompanies their aircraft during all aspects of maintenance.

3.9.2.17. N/A to the ANG. The following only applies to the ANG: Ensure, when authorized, that crew chief and assistant crew chief's name and rank is stenciled or painted on their aircraft. Follow the established wing paint scheme, unit standards, and marking procedures in TO 35-1-3, TO 1-1-8, and ANGI 21-105.

3.9.2.19. (Added) Take oil samples and complete appropriate documentation, as required.

3.9.2.20. (Added) Perform aircraft document review.

3.9.3. N/A to the ANG.

3.10. Not all ANG AMFs have specialist assigned.

3.10.2. If assigned.

3.10.6. If assigned.

3.10.7. If assigned.

3.10.8. If assigned.

3.11. **Weapons Element.** N/A to the ANG. The following only applies to the ANG: This section normally consists of two sections; weapons loading and armament systems. Weapons expediters may be assigned to manage flightline operations. A weapons loading section chief may be assigned to assist in managing flightline operations. Individual gun services and weapons release section chiefs may be assigned to support management of armament systems sections. An armament systems section chief may be assigned to assist in managing gun services, and weapons release sections. Weapons loading tasks must adhere to the minimum requirements of the weapons certification and weapons task qualification programs. Weapons personnel in rescue units are responsible for applicable portions of this chapter and Chapter 16 of this instruction. In addition to the common element supervisor responsibilities in Chapter 2, the weapons element supervisor:

3.11.1.4. Ensures at least 85 percent of the authorized load crew stated on the UCML/TTML are trained and certified to perform the mission.

3.11.1.8. N/A to the ANG. The following only applies to the ANG: May designate expediters and subordinate supervisors.

3.11.1.21. N/A to the ANG. The following only applies to the ANG: Inspects weapons element CTKs, armament test and support equipment for serviceability. Schedules and tracks inspections to ensure 100 percent of CTKs, test, and support equipment must be checked over a one-year timeframe. Documents inspection results and uses for follow-up action and reference as necessary. Ensures inspection is documented on appropriate equipment form such as AFTO Form 244 or AF IMT 2411.

3.11.1.23. N/A to the ANG. The following only applies to the ANG: Monitors upgrade training and qualifications of assigned workcenter personnel.

3.11.1.36. N/A to UAE owned F-16 block 60 equipment.

3.11.2. N/A to the ANG. The following only applies to the ANG: Weapons Loading: The weapons loading supervisor is responsible to the weapons element supervisor for all loading operations, and must be knowledgeable of the assigned MDS maintenance and loading tasks. The loading supervisor coordinates maintenance priorities with the flightline expeditor and Production Supervisor. In addition to common element/workcenter supervisor responsibilities outlined in Chapter 2 of this instruction, the weapons loading supervisor:

3.11.4. N/A to the ANG. The following only applies to the ANG: Armament Systems Section: Armament Systems Sections are not normally formed in rescue units. The armament section performs on/off-equipment maintenance for assigned aircraft armament systems, guns, pylons, racks, launchers, and adapters. The section stores, maintains, and accounts for all AME, tools, stocks, and equipment assigned to the element. Gun services and weapons release supervisors may be assigned to support management of the

armament shop. An armament shop supervisor may be assigned to assist in managing the gun and weapons release shops. In addition to common element/workcenter supervisor's responsibilities outlined in Chapter 2 of this instruction, the gun, weapons release, and/or armament supervisors:

3.11.4.9. (Added) Assists the wing weapons manager in recommending distribution of wing 2W1X1 personnel to satisfy on- and off-equipment weapons release and gun system maintenance.

3.11.4.10. (Added) Advises maintenance supervision and the wing weapons manager regarding factors which affect armament systems, gun maintenance, and other related programs.

3.11.4.11. (Added) Establishes and monitors gun room security and explosive licenses if required.

3.11.4.12. (Added) Ensures AME and SPRAM accountability and control requirements are met IAW AFI 21-103.

3.11.4.13. (Added) If applicable, supports WRM rack, adapter, pylon, launcher and gun maintenance requirements IAW AFI 25-101. Ensure all WRM racks, adapters, launchers, and guns are serviceable to meet unit taskings.

3.11.4.14. (Added) Provides the WWM monthly status on authorized/on-hand quantities and serviceability of AME/WRM, critical armament testers, and support equipment.

3.11.4.15. (Added) Establishes a SPRAM account to track F-16 Ruggedized Nuclear Remote Interface Units (RNRIU) and a munitions account for dummy test rounds and issued LAU-131 launchers if required.

3.11.4.16. (Added) Develops and implements a recognition program for assigned personnel.

3.11.4.17. (Added) Ensures compliance with hazardous material and hazardous waste management and air emissions record keeping as required for environmental compliance IAW applicable environmental requirements and guidance.

3.11.4.18. (Added) Ensures sufficient computer systems are assigned to support network and modem interface with the WWM, WS, Weapons Sections, automated training systems, and other agencies.

3.11.4.19. (Added) Identify to LRS, by NSN, all aircraft armament systems components that require acceptance inspections.

3.11.4.20. (Added) In coordination with PS&D, requisitions parts to satisfy time change requirements for aircraft armament or gun system components not identified in aircraft dash-6 TOs.

3.11.4.21. (Added) Maintains the MIS database for installed guns, gun systems, and gun component time change items or inspection data, based on round count limits listed in the dash-6 TO, including updating rounds from the AF IMT 2434 or locally developed form.

3.11.4.22. (Added) Advises the element chief of any factors limiting the maintenance capability.

3.11.4.23. (Added) Develops procedures, in coordination with the weapons element/section supervisors and wing weapons manager, on the governing accountability and control of AME.

3.11.4.24. (Added) Unpacks and packs assigned AME in storage.

3.11.4.25. (Added) Develops and implements a program for documenting issues and receipts of in-use AME.

3.11.4.26. (Added) Manages the supply function for the section IAW AFMAN 23-110.

3.11.4.27. (Added) Performs user calibration and maintenance on element TMDE.

3.11.4.28. (Added) Coordinates with TMDE to ensure calibration requirements are met.

3.11.4.29. (Added) Maintains the R-14 master ID listing.

3.11.4.30. (Added) Maintains CTKs, tool storage area and test equipment IAW Chapter 13.

3.11.4.31. (Added) Maintains the element technical order and publication files.

3.11.4.32. (Added) Maintains supply management documents (i.e., D04, D18, D19 and Q13).

3.11.5. If utilized. If a weapons expeditor is not assigned the following duties must be performed by a weapons loading supervisor. A weapons loading supervisor may be assigned to assist in managing flight-line operations.

3.11.5.5.2. Expenditure documents are not distributed to PS&D.

3.11.5.10. N/A to the ANG. The following only applies to the ANG: Performs supervisory spot checks of post loads of explosives loaded aircraft and maintenance inspections using the following guidelines:

3.11.5.10.1. (Added) Post load inspections need include only a sampling of loaded aircraft and must be at least one aircraft per flying day. The inspection must be documented in the WLCMP or equivalent or in the ANG Quality Assurance Database (QuAD) before the aircraft is considered “weapons ready”. The post load does not take the place of the weapons load crew chief’s “postloading” portion of the applicable 1X-XXX-33-1-2CL-X checklist.

3.11.5.10.2. (Added) The weapons expeditor, if used, shall perform these post load inspections. If no expediter is used, weapons supervisors shall perform the inspections. LSC must train weapons supervisors and any weapons element 7-levels qualified to perform expediter duties during their annual weapons academics class.

3.11.5.10.3. (Added) Any 2W171 eligible to perform expediter duties may be trained to perform post load spot-checks. Units shall determine these training requirements and do not require a special class or course code because they are taught in academics.

3.11.5.10.4. (Added) Trends from post load inspections should be forwarded to the LSC to help evaluate the effectiveness of their ongoing training efforts.

3.11.5.12. Or local form.

3.12.1. N/A to the ANG. The following only applies to the ANG: Personnel are formed into maintenance teams and are qualified to perform on-off equipment maintenance and do not normally load ammunition on the aircraft. This is normally done by the flight engineer or aerial gunner.

3.12.2.1. N/A to the ANG. The following only applies to the ANG: Perform chaff/flare loading as required. Perform applicable gun system functional checks. Perform both -6 and commodity tech order inspection requirements on associated guns and equipment.

3.12.2.2. N/A to the ANG. The following only applies to the ANG: Maintain weapons/munitions accounts as required.

3.15. **Support Section.** N/A to the ANG. The following only applies to the ANG: Support Section, when assigned. Organize a support section in each sortie support flight. 2W1X1 personnel may be required to maintain task qualification/certification. Refer to Chapter 8 of this instruction and AFMAN 23-110 for

guidance on supply procedures. Refer to Chapter 13 of this instruction for tool control guidance. The support section:

3.16. N/A to the ANG except the 116th ACW.

3.18. (Added) **The Transient Alert (T/A) Flight** (where authorized) is responsible for recovering, servicing, inspecting, maintaining, and launching transient aircraft. Procedures in this section apply to en route, military, contract, and civil service transient maintenance functions. Additionally, T/A:

3.18.1. (Added) Complies with provisions in TO 00-20-1 with regard to maintenance and reimbursement documentation. AF IMT 726, *Transient Aircraft Service Record*, may be used for documenting maintenance servicing requirements and billing information.

3.18.2. (Added) Promptly informs the MOC of all status changes on transient aircraft.

3.18.3. (Added) The scope and depth of required technical data to support transient aircraft shall be determined by the MXG/CC. If technical data and qualified personnel are not available then the pilot or qualified aircrew member must remain at the aircraft while basic servicing operations are performed. Under no circumstances shall maintenance be performed on transient aircraft without technical data and qualified personnel.

3.18.4. (Added) Ensures personnel authorized to run engines are qualified according to applicable Air Force and command directives. When there are no qualified maintenance personnel assigned to the T/A Flight, qualified aircrew members accomplish necessary engine runs for maintenance.

3.18.5. (Added) Maintains HAZMAT and ESOH items IAW with ESOH guidance.

4.1. **General.** N/A to the ANG. The following only applies to the ANG: The MXS provides support to the AMXS's sortie production and the depth to sustain maintenance effectiveness. The MXS is divided into two flights, the Component Maintenance Flight and the Equipment Maintenance Flight. The Component Maintenance Flight performs both on and off equipment maintenance on assigned aircraft and normally consists of the Avionics Element, the Propulsion Element, and the Accessory Element. The Equipment Maintenance Flight performs both on and off equipment maintenance on assigned aircraft and normally consists of the Fabrication Element, AGE Element, Inspection Element, and Munitions Element (when assigned). The extent of CUT tasking shall be locally determined. MDS peculiarities shall determine exceptions to the general organization of the MXS. **NOTE**: The terms and responsibilities associated with the sections identified in this chapter may differ or may be N/A to all units based on unit size, mission, and MDS assigned.

4.3. Flight OIC/SMO Responsibilities.

4.3.2. Within ANG manpower constraints.

4.3.7. N/A to the ANG.

4.3.11. Also may use JEDMICS when technical orders do not provide enough detail.

4.3.14. If used.

4.3.15. And ANGI 21-105.

4.5.1.1. N/A to the ANG. The following only applies to the ANG: In coordination with MOC and the MXS Production Supervisor if applicable, on maintenance priorities before dispatching personnel.

4.5.1.3. N/A to the ANG. The following only applies to the ANG: Specialists order parts using MIS.

4.5.2. N/A to the ANG. The following only applies to the ANG: Upon dispatch, technicians are responsible to the Pro Super, expediter, element/workcenter supervisor, or dock chief to:

4.5.2.6. (Added) Ensure MIS is completed and aircraft forms are accurate and completed in a timely manner.

4.6. **Accessory Element.** N/A to the ANG. The following only applies to the ANG: This activity performs on-and-off equipment maintenance of aircraft systems and associated support equipment. The element may be organized into the following shops: Pneudraulic, Electro-Environmental, Fuel Systems, Egress, and Repair and Reclamation/Wheel and Tire. The extent of CUT tasking shall be determined locally.

4.6.1. N/A to the ANG. The following only applies to the ANG: Accessory Element Supervisor. In addition to the common responsibilities in Chapter 2, the Accessory Element Supervisor:

4.6.1.4. (Added) Ensures compliance with crash recovery program responsibilities.

4.6.1.5. (Added) Ensures explosives are controlled and stored in approved storage areas.

4.6.2.3. If tasked.

4.6.2.4. **NOTE** : Responsibility for scheduling inspections, ordering parts, and reporting status of servicing carts shall be determined locally.

4.6.3.10. (Added) Egress Section is responsible for overall management and control of the egress configuration management. (CAMS/REMIS corrections).

4.6.4.1.5. The MXG/CC may appoint team members from other AFSCs as long as the person is task certified. These individuals must be listed on a SCR.

4.6.4.1.8.2.4. N/A to the ANG. The following only applies to the ANG: Fuels System personnel tasked as a nestable fuel tank build up (NFTBU) cadre member shall attend initial NFTBU training at a FTD. The Fuels Section shall establish and conduct annual refresher NFTBU training classes for all Fuel Systems personnel tasked for any UTC and document completed training in MIS. The Fuels System personnel trained by FTD must conduct the annual refresher training for other section personnel (refer to Chapter 18).

4.6.5.1. At MXG/CC option the local manufacture and testing of rigid tubing may be moved to another workcenter.

4.6.5.5. (Added) Reviews Air Logistics Center Drawing IAW TO 4S-1-182, to ensure cleaners used on landing gear components are approved.

4.7.1. The MXG/CC may assign the responsibilities of nonpowered AGE to other workcenters.

4.7.1.2. The MXG/CC has the option to relieve the AGE element from pickup and delivery of powered and nonpowered AGE.

4.7.2. N/A to the ANG. The following only applies to the ANG: AGE Element/Workcenter Supervisor Responsibilities. In addition to the general responsibilities in Chapter 2, the AGE Element/Workcenter Supervisor:

4.7.2.15. Provides annual equipment listings to ANG/LGMM. N/A to UAE owned F-16 block 60 equipment.

4.7.3. These duties shall be performed/assigned by the AGE Element Supervisor.

4.7.3.7. N/A to the ANG.

4.7.4. These duties shall be performed/assigned by the AGE Element Supervisor.

4.7.4.5. N/A to the ANG.

4.7.4.6. N/A to the ANG.

4.7.5. These duties shall be performed by the AGE personnel.

4.7.5.5. N/A to the ANG. The following only applies to the ANG: Prepare AGE and section equipment for storage or shipment.

4.7.5.8. N/A to the ANG. The following only applies to the ANG: Perform AGE operational checks before returning equipment to serviceable status.

4.7.5.9. At MXG/CC option.

4.7.5.10. (Added) Maintains all assigned F-2 type trailers. Trailers placed in-use receive pre and post-use serviceability inspections. Develops periodic inspection requirements (maximum interval of 18 months) for trailers in storage to include:

4.7.5.10.1. (Added) Corrosion inspection and preservation treatment.

4.7.5.10.2. (Added) Tire inflation check.

4.7.5.10.3. (Added) Wheel bearing and chassis lubrication.

4.7.6. These duties shall be performed by the AGE personnel.

4.7.6.4. N/A to the ANG. The following only applies to the ANG: Reviews AFTO Form 244 and AFTO Form 245, *Significant Historical Data*, for equipment prior to maintenance.

4.7.6.5. At MXG/CC option.

4.7.6.6. At MXG/CC option.

4.7.7. These duties shall be performed/assigned by the AGE Element Supervisor.

4.7.8. These duties shall be performed/assigned by the AGE Element Supervisor.

4.7.10. At MXG/CC option.

4.8. Paragraph **4.8.** and all subparagraphs are also N/A to the ANG.

4.9.1. The Avionics Element maintains avionics systems, related equipment, and components. It may consist of the Mission Systems Shop, Communications/Navigation Shop, Instrument/Flight Control/ Guidance Control Shop, Avionics Intermediate Shop/Intermediate Automatic Test Station, and Electronic Warfare.

4.9.2. N/A to the ANG. The following only applies to the ANG: Supervisor Responsibilities. In addition to the common responsibilities listed in Chapter 2, the Supervisor:

4.9.2.1. N/A to the ANG. The following only applies to the ANG: Coordinates with maintenance supervision to develop procedures for accomplishing programming of EWS. This element develops maintenance procedures, in conjunction with the OG/CC, to accomplish programming of EWS to include secure voice, IFF and Data Link.

4.9.2.5. This includes the calibration and repair of torque wrenches when not performed or maintained by PMEL, when approved by AFMETCAL Det 1.

4.9.2.6. N/A to the UAE owned F-16 block 60 program.

4.9.2.9. LM Aero shall provide configuration control for software for the UAE F-16 block 60 aircraft.

4.9.3. These responsibilities shall be performed/assigned by Avionics supervision.

4.9.4. These responsibilities shall be performed/assigned by Avionics supervision.

4.9.5. These responsibilities shall be performed/assigned by Avionics supervision.

4.9.6. These responsibilities shall be performed/assigned by Avionics supervision.

4.9.7. Paragraph **4.9.7.** and all subparagraphs are N/A to UAE F-16 block 60 program.

4.9.8. These responsibilities shall be performed/assigned by Avionics supervision.

4.9.9. Paragraph **4.9.9.** and all subparagraphs are also N/A to the ANG.

4.9.12.1. N/A to the ANG. The following only applies to the ANG: Performs on/off equipment maintenance on guidance and control systems, to include automatic flight control systems, all-weather landing systems, AHRS, instrument systems, attitude reference and bombing systems, flight director systems, auxiliary flight reference systems, pressure altimeters and encoders of the AIMS systems, engine test cell aircraft instrumentation, INS, and navigation computers. GCS must ensure the calibration and repair of torque wrenches when not performed or maintained by PMEL, when approved by AFMETCAL Det 1.

4.9.14.1. This function may be assigned to Avionics Element or AMXS depending on MDS.

4.9.15.1. N/A to the ANG. The following only applies to the ANG: Electronic Warfare (EW) Shop performs on- and/or off-equipment maintenance, depending on MDS, on RWR, chaff/flare dispensers, ECM systems. These EWS may be either internally or pod mounted in or on the aircraft. EW personnel ensure all classified EWS and TMDE are properly stored, transported, and controlled. If the EW workload is sufficiently small, the MXG/CC may assign this workload and associated manpower to another section/shop. EW personnel may be tasked to load chaff/flare IAW chapter 14.

4.9.17. Avionics Intermediate Shop (AIS) must ensure the calibration and repair of torque wrenches when not performed or maintained by PMEL, when approved by AFMETCAL Det 1.

4.9.23. (Added) Video Shop: performs on- and off-equipment maintenance on airborne video equipment such as video cameras, motion picture projectors, slide film projectors, video monitors, processing and distribution amplifiers, video audio switchers, synchronizing generators, and control circuitry. At MXG/CC option, this shop may be assigned to the Aircraft Maintenance Squadron.

4.9.24. (Added) Sensor/CTVS/AVTR performs on- and off-equipment maintenance on sensors, cockpit video system, and airborne video tape recording system. This function may be assigned to Avionics Element or AMXS depending on MDS.

4.10.1. N/A to the ANG. The following only applies to the ANG: This activity is responsible for modification, corrosion control, local manufacture, inspection, and repair of aircraft and SE beyond the owning workcenters capabilities. The element is organized into the following functions: Aircraft Metals Technology, Aircraft Structural Maintenance, Survival Equipment, and Nondestructive Inspection (NDI).

4.10.2. N/A to the ANG. The following only applies to the ANG: Element/workcenter supervisor Responsibilities. In addition to the common responsibilities outlined in Chapter 2, the element/workcenter supervisor:

4.10.5.2. N/A to the ANG. The following only applies to the ANG: Responsible for inspection, cleaning, and testing of aircraft and aircraft maintenance safety belts and harnesses, repair or fabrication of sound proofing materials, repair of organizational equipment and textile items. Evaluates the extent of damage and wear to material and equipment IAW technical data, and decides whether to repair or replace.

4.10.5.9. **NOTE** : The MXG/CC may direct this section to attach velcro, patches and rank insignia.

4.10.5.13. (Added) Ensures personnel conducting maintenance on parachutes are current and qualified in AFSC 2A7X4. If non-AFSC 2A7X4 personnel are used to conduct IPIs, they must attend a formal training course prior to conducting parachute maintenance.

4.11. The Maintenance Flight is not used except for the 116th ACW, however, sections duties are located as noted in subparagraphs.

4.11.2. N/A to the ANG. The following only applies to the ANG: Element/workcenter supervisor Responsibilities. In addition to the common responsibilities outlined in Chapter 2, the element/workcenter supervisor:

4.11.3. This section is in the Accessory Element of the Component Repair Flight and at local option, the MXG/CC may reassign responsibilities to other shops.

4.11.3.4. Accomplish and document inspections of crash recovery equipment IAW applicable directives, or at least semiannually if no directive is available. Crash recovery technical interchange meeting (TIM) attendance is recommended.

4.11.4. This section is in the Accessory Element of the Component Repair Flight.

4.11.5. This section is located in the Equipment Maintenance Flight (EMF) except for the 116th ACW.

4.11.5.1. If applicable.

4.11.5.3. At MXG/CC option, full time specialists may be assigned to the Inspection Section.

4.12. **Munitions Element.** N/A to the ANG. The following only applies to the ANG: This function is located in the EMF. Responsible for the control, accountability, storage, shipping and receiving, inspection, maintenance, assembly and delivery of conventional and precision guided munitions. The Element manages and maintains all assigned tools, test, and munitions handling equipment. It also administers and operates the Combat Ammunitions System (CAS). Munitions Elements are typically composed of three sections: Materiel, Production, and Systems. Munitions element supervisor, in coordination with QA, shall develop quarterly standards. Coordinate with the MXG/CC to establish unit procedures to reconcile training munitions issued for requirements in accordance with IAW AFI 36-2217, *Munitions Requirements for Aircrew Training.*

4.12.1.1. (Added) Deployable CAS is the primary means to account for munitions while deployed and in establishing “BARE BASE”. Units must develop and be able of implementing backup procedures to maintain accountability in event of system failure or power loss.

4.12.3. (Added) Ensures approval of LME IAW AFI 21-101 Paragraph 3.11.1.12.

4.12.4. (Added) Munitions Control (M/C). M/C shall use visual aids to provide access to critical data IAW AFI 21-201. MMHE and TCTO status must be tracked in one of the following options: CAS,

CAMS, or Munitions Control 2000 (MC2K). AFI 21-201, Paragraph 2.12.26. does not apply to the ANG units except MMHE.

4.13.1. N/A to the ANG. The following only applies to the ANG: The Propulsion Element maintains aircraft engine propulsion units, propulsion components, and propellers to include composite propeller blades. This element located in the CRF. The element performs engine/module/accessory disassembly, assembly, test, and repair. The element has responsibility for JEIM; test cell and NSS; accessory and QEC repair; small gas turbine; module/accessory repair section; engine support equipment; and turbo-prop/ turbo-shaft repair, engine isochronal/phase inspections, as required. These sections may be combined or grouped at the discretion of the maintenance Squadron/flight commander. Programs such as engine regionalization and 2LM may affect the standard organizational structure and responsibilities.

4.13.2. N/A to the ANG. The following only applies to the ANG: Element/workcenter supervisor responsibilities. In addition to common responsibilities in Chapter 2, the element supervisor:

4.13.2.13. The MXG/CC or OG/CC (as appropriate) shall appoint a Unit Engine Run Program Manager, preferably within the engine shop. Each individual designated as engine-run qualified is task certified on the SCR. Certification is documented in MIS by aircraft MDS/engine series with maximum power settings specified, when applicable.

4.13.2.19. And rigid borescope.

4.13.2.24. (Added) Ensures APU are tested, maintained and monitored IAW appropriate guidance, when applicable.

4.13.3.1.1. N/A to the ANG. The following only applies to the ANG: As the primary OAP Manager ensures all OAP responsibilities are performed IAW AFI 21-124 and ANGI 21-105.

4.13.4. If applicable, otherwise duties are performed/assigned by the Propulsion Element Supervisor.

4.13.5.7.1. Ensure a job control number created by the JEIM/Module/Accessories or EM section and is used to process repair of the engines, modules, and any additional flightline profile packages/WCE (N/A under G081). Schedule flightline profile packages/WCE and MIS profile packages against the flightline-generated WCE (N/A under G081). **EXCEPTION**: Engines received from off station operating units must establish new job control numbers and WCEs.

4.13.6. Ensure that inspections, repairs, and corrosion control are accomplished, and records are maintained on noise suppresser systems, test cells, and trim pads, when required.

4.13.8. The MXG/CC has the option to reassign these duties, if applicable.

4.14. **Test, Measurement, and Diagnostic Equipment (TMDE) Flight.** N/A to the ANG. The following only applies to the ANG: The MXG/CC designates a TMDE coordinator for liaison between the unit and the servicing TMDE laboratory. Local OIs must be published to ensure that unit TMDE is controlled, calibrated, repaired, and certified IAW prescribed directives. A host tenant agreement with the servicing PMEL must be accomplished when required. All TMDE specified as PMEL responsibility in TO 33K-1-100-1/2 must be sent to the PMEL for scheduled calibration and repair. Where an ANG Type II PMEL is assigned, the appropriate commander shall ensure the PMEL conforms to the provisions outlined in TO 00-20-14. ANG Flying units (except those collocated with a Type II PMEL on the same installation) may request authorization from Air Force Metrology and Calibration (AFMETCAL) Det 1 to support their own torque wrenches, by submitting a waiver package through ANG/LGMM, PMEL FAM with all supporting data IAW TO 00-20-14. Calibration responsibility waivers shall be considered for

"Torque Wrenches Only". CAF units shall assign the torque wrench calibration function to the AIS/Intermediate Automated Test Station (IATS), and Airlift/Tanker units shall assign it to the Avionics Guidance and Control Shop. Units receiving approval for a Torque Wrench Calibration Site must comply with all requirements listed in Chapter 18.32. All subparagraphs in section **4.14.** are also N/A to the ANG.

4.15. Applies to OCONUS Centralized Intermediate Repair Facilities (CIRFs) only.

4.16. (Added) **ANG CONUS Centralized Intermediate Repair Facilities (CIRFs).**

4.16. (Added) An ANG CONUS CIRF may be implemented for any active duty or Air Reserve Component intermediate repair asset within the United States and territories if approved by Air National Guard Director of Logistics (ANG/LG). A CONUS CIRF is different from an Air Logistics Center operating location that supports depot throughput or OCONUS CIRF that supports wartime or contingency units overseas. Paragraph **4.15.** applies to OCONUS support operations no matter where the CIRF is located, CONUS or OCONUS.

4.16.1. (Added) The purpose of ANG CONUS CIRF operations is to maintain or improve readiness. ANG/LG shall approve ANG CONUS CIRF operations and where these operations will occur. CONUS CIRF is optimum for systems that have constrained equipment, experienced personnel, or repair part availability. CONUS CIRFs should be deployable to meet wartime and contingency needs. Improved asset management, such as Engine Reliability Centered Maintenance, and reduced equipment needs are primary benefits to CONUS CIRF.

4.16.2. (Added) The maintenance concept for each item must be IAW ANG guidance. The supported wing may retain some repair capability to optimize the benefits of CIRF. These wing retained tasks shall be approved and defined by ANG/LGM.

4.16.3. (Added) The supply concept should mirror normal supply concepts and procedures. Pipeline spare and repair parts requirements must be evaluated and adjusted before CONUS CIRF operations are authorized. CIRF operations shall not commence until these initial spares are available. End item, LRU, and SRU asset distribution procedures shall be defined and approved by ANG/LGM and ANG Logistics Supply Division (ANG/LGS). ANG/LGM/LGS shall monitor and request modifications to equipment and stock levels such as POS, RSP, and WRM.

4.16.4. (Added) The transportation concept should mirror normal transportation concepts and procedures. As a rule, transportation costs shall be paid by the shipping agency. Units shall fund shipments to the CIRF as part of their normal Second Destination Transportation funding line and the ANG CIRF operating locations shall request funding from ANG Transportation Division (ANG/LGT) for shipments to ANG units. Transportation costs for customers outside the ANG must be in accordance with the support agreement and approved by ANG/LGT and ANG Logistics Resources Division (ANG/LGY).

4.16.5. (Added) All appropriate costs for repair shall be charged to the customer that sends the part to the CIRF. Utility costs shall be charged as agreed upon in the support agreement and approved by ANG Director of Civil Engineering (ANG/CE). Credit generating assets such as avionics items and wheel/tire build-up require special attention. These credits shall be documented and distributed to the customer.

4.16.6. (Added) Items repaired by the CIRF can be sent to any unit to fill a MICAP or other shortage. Items that have different modifications between Commands require special consideration.

4.16.7. (Added) Facility square footage authorizations should be adjusted for CIRF locations. Units should identify this additional or reduced requirement to ANG/CE.

4.16.8. (Added) Personnel requirements must be approved by ANG/LGY and ANG Manpower and Organization Directorate (ANG/XPM). When supporting a unit outside the ANG, these requirements should be funded by the customer. ANG/XPM/LGY shall approve redistribution of full and part time personnel authorizations within the ANG.

4.16.9. (Added) TCTO procedures shall be defined in the agreement between all organizations. Unit level TCTOs must be accomplished at the unit unless approved as part of the agreement.

4.16.10. (Added) Operating procedures, support agreements and other written guidance shall be coordinated with all units involved and approved by ANG/LG. As a minimum, financial, personnel, TCTO, equipment, transportation, supply, facility, asset distribution, bench stock, and management processes and procedures shall be documented and approved.

5.1. **General.** N/A to the ANG. The following only applies to the ANG: The MOF is responsible to the MXG/CC for aircraft maintenance staff functions required for the efficient operation of the Maintenance Group. This flight normally includes the MOC, PS&D, EM, Training Management, Maintenance Analysis, and Maintenance Plans and Programs. They are responsible to the MXG/CC for overall flight management. Additional common responsibilities are outlined in Chapter 2 of this publication.

5.2. **Commander/ Superintendent Responsibilities.**

5.3. N/A to the ANG.

5.4. **Maintenance Training Flight (MTF).** The 116th ACW must comply with AFI 21-101, Paragraph 5.4. guidance for the MTF. For all other ANG units the name for this office is Training Management. The maintenance training program ensures that all personnel are qualified to perform their job; and that a balance of skills is maintained for all maintenance personnel. The two elements of the training program are upgrade and qualification training. Upgrade Training (UGT) provides the job knowledge and required skill levels of an Air Force specialty. UGT administration is vested in the individual's supervisor/trainer, training management, and base training manager. Qualification Training is ongoing and designed for individuals to perform their job. Units shall locally determine which methods to use to provide qualification training. At local option, Training Management may be placed into Quality Assurance. In either case, the responsibilities outlined below must remain the same.

5.4.1. N/A to the ANG except for the 116th ACW.

5.4.2. Responsibilities of Training Management are:

5.4.2.2.1. N/A to the ANG except the 116th ACW.

5.4.2.6. N/A to the ANG.

5.4.2.11. Manages the testing program. Tests (may be automated) must be controlled to prevent compromise. Locally developed tests must be monitored for currency and accuracy. Training Management shall coordinate with functional areas to ensure a comprehensive annual review is conducted and shall update tests when required. The 116th ACW must comply with AFI guidance for the MTF.

5.4.2.13. N/A to the ANG. The following only applies to the ANG: Training or the section responsible for conducting the training coordinates with PS&D for selecting training aircraft. Training Management must forward training requirements in a monthly format (including configuration and time periods) to PS&D by the end of the second week of each month for inclusion in the monthly maintenance schedule. Training requirements must be updated weekly and forwarded to PS&D for inclusion in the weekly maintenance

plan. Aircraft down for training more than seven consecutive days must be carried in an aircraft possession purpose identifier code of TJ.

5.4.2.14.1. (Added) Ensures the SCR is current.

5.4.2.14.2. (Added) Ensures the SCR is coordinated with workcenters, squadron/flight commanders, Quality Assurance, and approved by the MXG/CC.

5.4.2.14.3. (Added) Maintains a copy of the SCR and forwards a signed master copy to QA.

5.4.2.14.4. (Added) A copy of the applicable portion of the SCR shall be made available to each flight either through hardcopy or MIS format.

5.4.2.17. When an individual is TDY, on leave, or incapacitated, that person need not be decertified provided the required evaluations are completed within 90 days of the member's return to duty, not to exceed three calendar months from original due date.

5.4.2.18. N/A to the ANG. The following only applies to the ANG: Process and coordinates upgrade Training Waivers.

5.4.4. (Added) Personnel Processing. During in-processing, Training Management and workcenter supervisors must review and evaluate all previous training completions and current workcenter requirements. The individual's training records and requirements must be updated at this time. During out-processing, Training Management must delete any scheduled training events. Any individual in UGT must be deleted from UGT and a copy of all completed training must be placed in their AF IMT 623.

5.4.5. (Added) Is responsible for overall management and control of the automated training management sub-system (ATS).

5.5. The MOS/CC position does not normally exist in the ANG. The duties in this paragraph shall be performed by the MOF/CC or MOF superintendent. MSL does not fall under the MOF for ANG units.

5.5.1. Paragraph 5.5.1 and all subparagraphs are N/A to the UAE F-16 block 60 program, however, 162nd FW in conjunction with General Electric (GE) and LM Aero shall develop local procedures in an OI/Sup.

5.5.1.1.9. (Added) TO 00-20-5-1-1*, Engine Historical Records F-100-PW-100/200/220 Engines.*

5.5.1.1.10. (Added) TO 2J-1-18, *Preparation for Shipment and Storage of Gas Turbine Engines.*

5.5.1.2. N/A to the ANG. The following only applies to the ANG: Coordinate with aircraft maintenance, PS&D, and propulsion element on engines and components, TCIs, SIs, TCTOs, modifications, and ensures TCTOs and TCIs are requisitioned for the EM section IAW guidance found in Chapter 15 of this instruction.

5.5.1.7. Initiates AF IMT 2410, *Inspection/TCTO Planning Checklist*, and AF IMT 2001, *Notification of TCTO Kit Requirement*, for TCTO kits, parts, and tools and forwards the AF IMT 2001 to the flight service center or LRS. Maintains TCTO folders for engine-related TCTOs.

5.5.1.9.3. This data must be routed to the Engine Management Section at the time the engine is returned to JEIM for repair and the data must include, but is not limited to, the reason for the rejection and the time of occurrence. For engines that are accepted at test cell, the data that is required are all repairs, servicing, and if preservation of the engine was required.

5.5.1.13. N/A to the ANG. The following only applies to the ANG: Publish scheduled engine changes in the monthly maintenance plan or in the first weekly maintenance plan of the effective month.

5.5.1.20.5. N/A to the ANG.

5.5.1.20.6. To include imbedded parts, part number, serial number, engine operating times, inspections, active TCTOs, and TCIs. AHE maintained in MIS does not have to mirror CEMS.

5.5.1.20.13. N/A to the ANG. The following only applies to the ANG: Ensure engines are prepared for shipment according to TO 2J-1-18, and TO 00-85-20, *Engine Shipping Instructions*, and place them in air-freight area within 72 hours after the engine change is completed. Notify ANG/LGMM engine management and the owning SRAN if this time frame can't be met.

5.5.1.22. (Added) Forecast life limit change requirements resulting from analysis of life limit data and engine time change/inspection requirements and engine historical document files.

5.5.1.23. (Added) Ensure transferred engines or major assemblies are accompanied by assigned TCTO kits and the required historical documentation.

5.5.1.24. (Added) Ensure that command-directed modifications and rescissions requiring decompliance work are accomplished.

5.5.1.25. (Added) Coordinate with LRS to ensure requirements for ENMCS are accurately reported and promptly requisitioned.

5.5.1.26. (Added) Check the non-installed spare engine historical preservation record IAW TO 2J-1-18.

5.5.1.27. (Added) Ensure comments on the status of engines in unserviceable categories (INW, AWP, AWM) are entered into the information analysis web site (GUARDIAN) daily. The web site address is: (**https://guardian.drc.com/Main/Home.asp**).

5.6. N/A to the ANG.

5.8. At local option, Management Analysis function may be placed into Quality Assurance. In either case, the responsibilities outlined below shall remain the same.

5.8.1. As a minimum using the metrics from Paragraph 1.10., monthly.

5.8.2. The AFKS formerly known as EDW is also a prime sources of data.

5.8.4.2. N/A to the ANG except for the 116th ACW.

5.8.20.2. System response and/or connectivity issues should generally be worked first locally, and at a minimum, open a trouble ticket for tracking purposes, coordinated with the local Administrator/POC/DBM and Communications Squadron, prior to calling the FAB/Help Desk.

5.8.20.3. N/A to the ANG. The following only applies to the ANG: The MDSA element/workcenter supervisor ensures trained database managers have the capability to support processing requirements for CAMS. Training may be obtained through the local communications squadron, AETC specialized courses or contractor training.

5.8.20.5. N/A to the ANG. The following only applies to the ANG: Managing the CAMS Database. MDSA provides management control of the CAMS database. The DBM responsibilities are as follows:

5.8.20.5.5. If applicable, provides support to tenant users and establishes MOAs.

5.8.20.5.6. N/A to the ANG. The following only applies to the ANG: Coordinates with the Defense Mega Center (DMC), AFNCC, BNCC, or RPC on all matters concerning CAMS and with ANG Network Operations Security Center (ANG/NOSC) and ANG Regional Operations Security Center (ANG/ROSC) when applicable. A trouble ticket must be established prior to coordination. The DBM has sole responsibility for coordinating with DMC or RPC. Deviations from this policy must be clearly stated in local OIs and published by the host GP/CC.

5.8.20.5.20. System response time exceeding ten seconds should be reported to the unit's DBM then up channeled to ANG/LGMM.

5.8.20.5.21. Notifies ANG/LGMM of extended unscheduled computer downtime (over four hours), or when experiencing problems beyond the capabilities of the unit's DBM. N/A to the UAE owned F-16 block 60 program.

5.8.20.5.25. N/A to the ANG.

5.8.20.5.26. Ensures proper use and control of the database fix keys provided by the gaining MAJCOM and FAB.

5.8.20.12. The DIT/DIG must include at least one representative from each squadron that repairs aircraft, and participation from PS&D, the MOC, the CSSM, EM, Debrief, and QA on an as needed basis, as determined by the MDSA. The DIT shall meet monthly.

5.8.20.12.1. A minimum of 25 percent of the fleet per quarter needs to be checked.

5.8.20.13. The MXG/CC may establish a CAMS/G081 Users Group. Otherwise duties shall be performed by the DIT.

5.8.20.20. N/A to the ANG. All subparagraphs of **5.8.20.20.** are also N/A to the ANG.

5.8.21. (Added) Except for the 116th ACW, prepares a data summary (ANG 7401 Report) for crosstell purposed. The SPOC, in coordination with ANG/LGMM, shall specify preparation, frequency, effective date, distribution, and data elements to be reported. Compiles and submits the ANG 7401 report to ANG/LGMM by the 11th working day of each month for the preceding month through Guardian. Procedural guidance can be found in ANGPAM 21-103, *Maintenance Data Systems Analysis Guide*.

5.8.22. (Added) G081 Management. This function manages and coordinates the overall use and development of G081 equipment and programs within the maintenance complex and management of the system to meet unit, ANG and AMC requirements. The G081 management element is responsible for the following:

5.8.22.1. (Added) Developing and maintaining an OI for local management of G081, which as a minimum contains:

5.8.22.1.1. (Added) Contingency plans for the support of critical areas during extended computer downtime.

5.8.22.1.2. (Added) Use of the G081 system during deployments and contingency operations.

5.8.22.2. (Added) Assisting agencies within the maintenance complex to better utilize G081.

5.8.22.3. (Added) Maintaining an up-to-date master copy of all publications pertaining to G081 policies, procedures, programs, and ensuring changes are briefed to all users.

5.8.22.4. (Added) Ensuring integrity of the database is maintained by limiting user access to authorized workcenters and personnel.

5.8.22.5. (Added) Assigning USERID/Password access to G081 users. Monitoring and assisting users with LOGIN procedures. Unlocking and resetting passwords as requested by users.

5.8.22.6. (Added) Acting as approval agency for the MXG/CC or MOF commander on program 8033 off-base messages.

5.8.22.7. (Added) Trouble Reporting. G081 management is the primary POC for reporting all G081 related problems. Trouble reporting is directed to G081 management element.

5.8.22.8. (Added) Coordinating with ANG/LGMM personnel concerning hardware and software problems.

5.8.22.9. (Added) Ensuring all G081 users are informed of downtimes scheduled for preventive maintenance.

5.8.22.10. (Added) Providing specialized functional or workcenter training to POCs to ensure computer competency at the user level.

5.8.22.11. (Added) Assisting maintenance activities in the proper application and interpretation of G081 technical publications.

5.8.22.12. (Added) Troubleshooting and, if possible, solving G081 related problems beyond the capabilities of the functional users. If solving the problem is beyond G081 management capability, identifying the problem to ANG/LGMM for corrective action.

5.8.22.13. (Added) Ensuring G081 users are aware of problems and corrective actions relating to G081.

5.8.22.14. (Added) Ensuring that users are aware of problems including System Deficiency Reports (529s) applicable to the functional area by evaluating all recommended F9038 program changes received from other G081 users.

5.8.22.15. (Added) Coordinating with the MXG/CC or MOF commander/superintendent and applicable staff organizations on matters concerning interface with associated systems at base level, as directed by ANG/LGMM.

5.10. **Programs and Deployments.** N/A to the ANG. The following only applies to the ANG:

5.10.1. N/A to the ANG. The following only applies to the ANG: The program and deployments section manages the manning, facilities, and deployment functions for the group.

5.10.2. N/A to the ANG. The following only applies to the ANG: Manages manpower and assignments for the group.

5.10.11. (Added) Programs Section is responsible for overall management and control of the personnel management subsystem.

5.10.11.1. (Added) Assists the deployed senior maintenance representative with site surveys.

5.10.11.2. (Added) Coordinates with Wing Plans to compile the data necessary to implement and maintain the deployment database.

5.10.11.3. (Added) Reviews all operations plans requiring support from the aircraft maintenance complex.

5.10.11.4. (Added) Coordinates maintenance planning actions in support of all aircraft maintenance plans with concerned activities.

5.10.11.5. (Added) Maintains personnel and equipment rosters, applicable plans, and checklists required to deploy aircraft maintenance personnel and equipment.

5.10.11.6. (Added) Ensures personnel readiness folders (if used) are maintained.

5.10.11.7. (Added) Prepares and submits financial requirements for inclusion in the base financial plan and operating budget. Coordinates with each cost center to assess financial needs. Advises the MXG/CC on the distribution of the operating budget. Analyzes past expenses, current expenses, and programs to project the financial requirements.

5.10.11.8. (Added) Monitors the status of expenses to include Depot Level Repairables (DLR) by cost center and briefs the MXG/CC of unusual expenditures that may impact the unit's financial condition. Reviews financial status to ensure each cost center receives equitable and necessary base-funded materials and services.

5.10.11.9. (Added) Evaluates trends and operating costs, which are used in projecting commitments and obligations.

5.10.11.10. (Added) As required, provides training to the cost center managers.

5.10.11.11. (Added) Maintains a current copy of the Maintenance manning documents.

5.10.11.12. (Added) Initiates/coordinates on all personnel assignments and change requests. Monitors critical AFSCs. Ensures assigned personnel are properly loaded in the personnel data system.

5.10.11.13. (Added) Is familiar with all Maintenance facilities. On an annual basis determines if existing facilities are suitable for the activities to which they are assigned.

5.10.11.14. (Added) Serves as the focal point for the management of facilities and development of the master aircraft-parking plan in coordination with the Airfield Manager. Include tenant unit parking plan in the host unit's master parking plan. Coordinates on all work requests for new construction or alteration to existing facilities. Coordinates all facility requirements with affected agencies.

5.10.11.15. (Added) Is the focal point for Maintenance inputs to support agreements.

5.10.11.16. (Added) Conducts staff-assist visits, and documents, at least annually, to each maintenance shop to assist with financial management, personnel management, facility management, and deployment planning.

5.10.11.17. (Added) Monitors and validates all telephone installation requests, if applicable.

5.10.12. (Added) The Maintenance Plans (these duties may be in the Programs and Deployments Section) responsibilities are outlined in AFI 36-2129, *Logistics Plans Management*, and include the following:

5.10.12.1. (Added) Assists the installation deployment officer (frequently the senior Maintenance Plans officer in the Maintenance Plans flight) in managing the installation deployment program IAW AFI 10-403.

5.10.12.2. (Added) Develops a briefing to inform all SNCOs and officers of the wings wartime taskings and DOC Statement requirements. The briefing must also cover Aerospace Expeditionary Force (AEF) vulnerability windows.

5.10.12.3. (Added) Publishes installation deployment guidance.

5.10.12.4. (Added) Manages the wing's Contingency Operations/Mobility Planning and Execution System (COMPES) Logistics Module (LOGMOD) program.

5.10.12.5. (Added) Serves as the focal point for all logistics planning.

5.10.12.6. (Added) Administers the wing support agreement program (Maintenance Plans) IAW AFI 25-201. Additionally, serves as focal point for any host nation or third country requests for logistical support.

5.10.12.7. (Added) If designated as a UTC Pilot Unit:

5.10.12.7.1. (Added) Coordinates with Wing Plans and those other UTC tasked units on cargo and equipment authorizations/requirements in order to develop and maintain a standardized package, which meets the specific mission capability requirements.

5.10.12.7.2. (Added) Coordinates with Wing Plans and the AS monitor for that UTC on equipment changes and new equipment requirements.

5.10.12.7.3. (Added) Assists with site surveys of deployment locations.

5.11.1. Applicable to the 116th ACW.

6.1.6. Automated products containing the same information are acceptable.

6.1.12. Automated products containing the same information are acceptable.

6.1.13. N/A to the UAE owned F-16 block 60 program.

6.1.22. (Added) Prepares aircraft-condition projections for reporting through SORTS. N/A to the UAE owned F-16 block 60 program.

6.1.23. (Added) MOC must coordinate, track, and assign a control number for cannibalization actions.

6.4.1. Show DOC limitations against FSL and the BSL as itemized on the MESL on the ANG/LGM web site. N/A to the UAE owned F-16 block 60 program.

6.5.2. Secure Telephone Unit (STU) phones are authorized.

6.6.2. Specialists must report job completions, start and stop times, ETIC slippages, and significant problems to maintenance supervision and/or the MOC.

7.1.5. **EXCEPTION** : QA may authorize use of preprinted manual aircraft forms during those times when the MIS in unavailable.

7.2. **Aircraft Document Reviews (ADR).** N/A to the ANG. The following only applies to the ANG: Aircraft AFTO Form 781-series for possessed aircraft are reviewed by flightline maintenance functions (crew chief or alternate), PS&D, EM, NDI OAP Lab, and LRS to ensure the accuracy and validity of entries. **NOTE**: This applies to all ANG MOF PS&D.

7.3.2. MIS products that exceed manageable print size may be stored in digital format.

7.4.1. N/A to the ANG. The following only applies to the ANG: Clear Repeat/Recur discrepancies. These types of discrepancies require additional supervisory involvement to ensure thorough troubleshooting. Only 7-skill level or higher personnel can clear the appropriate symbol IAW TO 00-20-1.

7.5.1.1. N/A to the ANG. The following only applies to the ANG: When discrepancy cannot be duplicated, the technician must document troubleshooting actions and add "Can Not Duplicate Malfunction" in corrective action block. These types of discrepancies require additional supervisory involvement to ensure thorough troubleshooting. Only 7-skill level or higher shall clear the symbol IAW TO 00-20-1.

7.6.1. N/A to the ANG. The following only applies to the ANG: Data Integrity Teams. Units must form DIT led by MDSA, with a representative from each squadron that repairs aircraft, and participation from PS&D, the MOC, the CSSM, EM, Debrief, and QA on an as needed basis, as determined by the MDSA. The DIT shall be the final authority in resolving any MIS entries, and therefore requires the complete backing of senior unit leadership. DIT is not required for contract maintenance organizations unless specified in the SOW.

8.1. Within the ANG, units are supported through CSSM under the LRS. Detailed procedures for management of CSSM is outlined in AFMAN 23-110. The 162nd FW, LM Aero and UAE shall determine in local procedures UAE F-16 block 60 supply support.

8.2. **NOTE** : IAW AFI 21-123, AFREP is optional to the ANG.

8.3.3.8. Or supply designated "priority repair" spares.

8.4. **Decentralized Supply Support.** N/A to the ANG. The following only applies to the ANG: Within the ANG, maintenance supply support is obtained from the CSSM section under the LRS. Customer's procedures for the management of CSSM are outlined in AFMAN 23-110. The procedures outlined below provide general responsibilities to maintenance personnel regarding their role in obtaining needed supplies and equipment to maintain combat ready aircraft. CSSM personnel shall assist maintenance in processing requisitions, researching sources of supply, completing DD Form 1348-6, *DoD Single Line Item Requisition System Document,* entering manual requisitions (part number only), updating exception code lists, and other peculiar maintenance supply problems.

8.5.4.3. Notifies the Customer Service Representative (CSR) in CSSM to cancel those requests that are no longer required. Also notifies the Customer Service Representative to downgrade UJC as necessary (NMC to delay discrepancy, etc.) to save transportation costs.

8.5.4.5. The proper use of the UJC on parts requests, to designate the impact and type of need. The UND is the first position of the UJC and indicates the impact of the request. The use of the following UNDs: "1", "J", and "A" are restricted and must be verified by the Pro Super, expediter or as designated by the MXG/CC.

8.15. Identify any additions, deletions, or changes of SPRAM assets to the equipment management section of LRS.

8.17.1.1. N/A to the ANG. The following only applies to the ANG: Loads the item record for the TCTO upon receipt of TCTO requirements from maintenance.

9.17. (Added) **Use of Cordless tools and Mag lite type flashlights on JP-8 serviced aircraft.**

9.17.1. (Added) The use of cordless tools and Mag lite type flashlights (or other battery powered tools/ flashlights not approved for use in a Class I, Division I, hazardous atmosphere) are authorized for use on JP-8 serviced aircraft as long as the following is adhered to. Interiors (flight deck, fuselage etc.) are not considered a classed environment regardless if the aircraft is hangared or not.

9.17.1.1. (Added) Cordless tools must not be used during fuel servicing.

9.17.1.2. (Added) Cordless tools/lites must not be used during fuel system/tank/cell maintenance, to include removal of any panels that provide access to fuel cells/tanks, or probes, and engine enclosures.

9.17.1.3. (Added) Cordless tools must not be used within five feet of a fuel vent.

9.17.1.4. (Added) Batteries must not be charged or changed in a Class I hazardous atmosphere.

9.17.1.5. (Added) Cordless tools must not be used in the vicinity of known or suspected fuel leaks.

9.17.1.6. (Added) Mag lite type flashlights may be used for all routine maintenance actions, to include fuel servicing, as long as they are not used within 1 foot of fuel vents and are 6 volts or less.

9.17.2. (Added) A JP-8 serviced aircraft is defined as an aircraft that has been consecutively serviced with JP-8 at least four times.

9.17.3. (Added) An OI must be written to ensure cordless tools/flashlights that are not approved for use in a Class I, Division I, hazardous atmosphere are not used on non JP-8 serviced aircraft, if required.

9.18. (Added) **Use of Cell Phones and Pagers.**

9.18.1. (Added) No personally purchased communications devices shall be allowed on the flightline or in hangar floor areas (cell phones, pagers, etc.).

10.1. ANG units shall use the ANG QuAD for documenting QA evaluations. Other QuAD functions may be used at the QA Chief's discretion. At local option, Management Analysis and/or Training Management may be assigned as an integrated part of QA rather than the Maintenance Operations Flight. If this option is exercised, the duties and responsibilities of Training and Analysis are specified in Chapter 5.

10.2.4. Or locally developed form.

10.2.7. Affected workcenters shall assist in the development and instruction of an effective chafing program.

10.2.8. N/A to the ANG. The following only applies to the ANG: Flightline weapons loading inspections/ evaluations are the responsibility of WS and QA evaluators.

10.2.13. (Added) SGO evaluations as applicable.

10.2.14. (Added) JEDMICS use is optional, however if used, manage the program in accordance with ANG Policy Memorandum 21-407.

10.2.15. (Added) QAR Program, if applicable.

10.3.1. Acts as the primary technical advisor within aircraft maintenance.

10.3.4. Reviews and approves all locally developed checklists, checksheets, forms, preprints, JST, and TO Local Page supplements.

10.3.5.4. PIM responsibilities may be distributed among inspectors as needed.

10.3.9. N/A to the ANG. The following only applies to the ANG: QA shall provide assistance to the safety office when investigating dropped object incidents if requested.

10.3.21. (Added) JEDMICS if applicable.

10.3.22. (Added) Monitors the Repair Enhancement program if applicable.

10.3.23. (Added) Monitors maintenance crosstells. Distributes maintenance and safety crosstell messages as applicable within the maintenance complex.

10.3.24. (Added) Reviews and monitors special certification roster for currency, qualification and applicability. Maintains a signed master copy of the SCR.

10.3.25. (Added) Controls and issues inspector stamps, when used, for QA personnel.

10.4. The QA Superintendent may elect to appoint a Chief Inspector or distribute these responsibilities to individual inspectors as appropriate.

10.5. QA inspectors shall manage programs and perform duties as assigned by the Quality Assurance Superintendent and/or Chief Inspector, if assigned.

10.5.1. QA Inspectors may inspect 2W1 maintenance tasks. Does not apply to certification loads.

10.5.6. (Added) Performs evaluations and technical inspections in all maintenance functions, to include MOF and survival equipment, as directed by the MXG/CC.

10.5.7. (Added) Periodically evaluate weapons loading and other maintenance actions performed during sortie generation operations.

10.5.8. (Added) Reviews and submits wing depot-level assistance requests developed IAW TO 00-25-107.

10.7. Cross utilization of permanently assigned QA personnel should be encouraged to minimize the use of augmentees.

10.8. N/A to the ANG except for the 116th ACW active duty personnel.

10.10.1. ANG Compliance and Standardization Requirements Lists (C&SRLs) shall be used as a minimum at the unit level.

10.10.1.4. ANG MSEPs shall not be graded.

10.10.1.5. (Added) ANG MSEP. The purpose of the ANG MSEP is to evaluate key maintenance processes and personnel evaluations to ensure compliance with DoD, AF, ANG, and other directives. The MSET shall fulfill this purpose employing a combination of C&SRL reviews, QVIs, SIs, observations, and personnel evaluations. Units must be evaluated every four years.

10.10.1.5.1. (Added) MANAGEMENT OF ANG MSEP. The MSEP shall be managed ANG Logistics Readiness Division (ANG/LGRI). The ANG/LGRI shall ensure there is a sufficient amount of trained evaluators to support the MSET and shall ensure funding is available for travel and per diem for the MSET.

10.10.1.5.2. (Added) The ANG MSEP is administered by utilizing a web based tracking program to provide follow-up and ensure positive and lasting corrective actions in a timely manner. The web site shall be the primary informational interface for the ANG units and include an MSEP library for crosstell purposes.

10.10.1.6. (Added) TEAM COMPOSITION. The MSETs will be made up of a core leadership team from ANG/LGRI (Team Chief, Assistant Team Chief, and optional Administrative Support), along with approximately 19 field augmented personnel from ANG Units. **Table 10.1. (Added)**, ANG MSET Team Composition (Core from Air National Guard Readiness Center and **Table 10.2. (Added)**, ANG MSET Team Composition (from Field), lists the required functional areas and suggested number of personnel for team composition. ANG/LG functional managers retain team composition oversight by reviewing selected team member lists prior to initial evaluator training. Of the 19 field positions that are not MDS specific these may be augmented from any ANG unit, utilizing a pool of pre-identified individuals who are recognized as resident experts in their respective career fields. For Composite Wings, the MSET will

consist of personnel from each of the Composite Wing's MDSs; Composite Wing MSET may include more than the recommended 19 field personnel. The MSET chief for each evaluation shall determine the final team composition.

Table 10.1. (Added) ANG MSET Team Composition (Core from Air National Guard Readiness Center).

Qty	Title	MD-Specific	Remarks
1	Team Chief	No	Field Grade Officer
1	Assist. Team Chief	No	CMSgt
1	Admin	No	SSgt or above 3AXXO, proficient in Microsoft Office; could be civilian
3	*Subtotal*		

Table 10.2. (Added) ANG MSET Team Composition (from Field).

Qty	Title	MD-Specific	Remarks
1	Maintenance Officer	Yes	
1	Maintenance Analysis	No (MDC-specific)	
1	PS&D	No	Two, if CEMS duties are performed in the unit
1	Maintenance Training	No	
3	Quality Assurance	No (TODO)	To include one TODO or a QA member proficient in TODO duties
3	AMXS	Yes	Includes one member of the three from 2W1XX for CAF units
4	CRF	Yes	To include one member from Propulsion
5	EMF	No (AGE and Munitions)	To include one member from AGE, one member from Munitions, and one member from Inspection
19	*Subtotal*		
22	***Total Team members***		

10.10.1.6.1. (Added) ANG/LGRI shall coordinate with MDS specific MXG Advisory Council Chairs to identify the number of teams, team composition and manpower pool for team members.

10.10.1.6.2. (Added) If the team POC cannot fill all of the positions for any given Maintenance Standardization Evaluation (MSE) from the authorized evaluator pool, they are authorized to fill these positions from other MDS evaluator pools.

10.10.1.7. (Added) MSET TIMELINE. ANG/LGRI shall develop the MSET schedule and publish it annually on the ANG MSEP Web site. This schedule shall be coordinated, in advance, with each unit and must not conflict with: Inspection cycles, AEF commitments, other critical unit schedules, and the National Guard Bureau Inspector General (NGB/IG) schedule. In extreme circumstances, a unit may be able to slip their evaluation per a validated request from the unit MXG/CC and subsequent approval of ANG/LGRI. **Table 10.3. (Added)** is a general MSET timeline.

Table 10.3. (Added) MSET Timeline

Day One	Team travel
Day Two	Morning team meeting Unit In-briefing Begin evaluation Afternoon team meeting Team Chief's "how goes it" with unit MXG/CC
Day Three – Five	Morning Team meeting Evaluation Afternoon Team meeting Team Chief's "how goes it" with unit MXG/CC
Day Six	Morning Team meeting Validation of findings Preparation of report Team Chief's "how goes it" with unit MXG/CC
Day Seven	Unit Out-briefing
Day Eight	Team Travel

10.10.1.7.1. (Added) Six months prior to visit:

10.10.1.7.1.1. (Added) ANG/LGRI notify unit of impending MSE with projected date.

10.10.1.7.1.2. (Added) ANG/LGRI send out official notification letter to unit.

10.10.1.7.1.3. (Added) Team chief in coordination with the MDS MXG Council Chair shall appoint team POC who shall be responsible for the coordination of the MSE.

10.10.1.7.1.4. (Added) Team POC to identify available personnel using the evaluator pool list as a guide to fill shortfalls.

10.10.1.7.1.5. (Added) Evaluated unit provides ANG/LGRI with name of unit POC.

10.10.1.7.2. (Added) NLT 90 days prior to visit:

10.10.1.7.2.1. (Added) ANG/LGRI notifies team POC of the evaluated unit POC.

10.10.1.7.2.2. (Added) Team POC will confirm all members of the evaluation teams availability and assign specific C&SRLs to each team member.

10.10.1.7.2.3. (Added) Team POC starts coordination for evaluated unit support items.

10.10.1.7.2.4. (Added) ANG/LGRI shall coordinate with evaluated unit's POC to establish maximum number of observers. ANG/LGRI will then establish the priority for the observers. Priority shall be as follows: (1) Like MDS units scheduled for a MSEP or UCI within the next 12 months. (2) Members of other MSET teams (if they desire). (3) Other units interested.

10.10.1.7.3. (Added) NLT 30 days prior to visit:

10.10.1.7.3.1. (Added) Team POC confirm final Team member roster.

10.10.1.7.3.2. (Added) Team POC sends information out to team members on billeting arrangements, schedules, meeting area, and other pertinent information.

10.10.1.7.3.3. (Added) Evaluated unit POC electronically transmits or overnight mail Unit OIs and unit completed C&SRLs to the team POC. Specifically include Wing and Maintenance Group 11, 21, and 91-series instructions.

10.10.1.7.3.4. (Added) Team POC provide team/observer roster to evaluated unit POC for entry authorization list (EAL).

10.10.1.7.3.5. (Added) Team POC validates rental car requirements.

10.10.1.7.3.6. (Added) Team members begin orders and travel arrangement processing (Team members).

10.10.1.7.3.7. (Added) Evaluated unit provide team chief any unit limiting factors.

10.10.1.7.4. (Added) NLT 15 days prior to visit:

10.10.1.7.4.1. (Added) Evaluated unit POC prepares welcome packages.

10.10.1.8. (Added) MSE EXECUTION.

10.10.1.8.1. (Added) The MSE shall consist of two key areas:

10.10.1.8.1.1. (Added) A review of applicable directives with key MXG personnel. Review of all applicable C&SRLs, directives, locally developed checklists and local OIs.

10.10.1.8.1.2. (Added) PEs, QVIs, SIs and observations on selected maintenance.

10.10.1.8.2. (Added) The PE shall be selected from the maintenance being performed during the team visit with a goal of at least one PE per workcenter. No "Make work" maintenance shall be generated. If a shop is performing no maintenance during the visit, only the applicable C&SRLs and directives must be evaluated. Additional PEs shall be at the discretion of the Team Chief (e.g., the AMXS would require more than one PE).

10.10.1.9. (Added) Final Report: The team chief shall provide the MXG/CC the final report prior to leaving the base.

10.10.1.9.1. (Added) Within five days after the evaluation, the team chief shall submit a copy of the detailed report to ANG/LG. This report, at a minimum, shall consist of observations, findings, best practices, outstanding personnel, and ANG Action Items.

10.10.1.10. (Added) Corrective Actions: The unit must answer all write-ups categorized as "Findings" and report their answers to ANG/LGRI through the established web-based application. The unit shall have 30 days for critical findings and 90 days for other findings to submit their corrective actions and estimated completion dates, if required.

10.10.1.11. (Added) Team POC Responsibilities:

10.10.1.11.1. (Added) Assemble team members in coordination with the team chief.

10.10.1.11.2. (Added) Coordinate Bureau Directed Travel (BDT) for the team.

10.10.1.11.3. (Added) Distribute information and team Members Guide NLT 30 days prior.

10.10.1.11.4. (Added) Ensure team members meet minimum criteria.

10.10.1.11.5. (Added) Fill team member shortfalls from sister units.

10.10.1.11.6. (Added) Ensure team members MXG/CC approves participation.

10.10.1.11.7. (Added) Evaluate lodging and rental car requirements.

10.10.1.11.8. (Added) Closely coordinate with the team chief on unresolved shortfalls.

10.10.1.11.9. (Added) Coordinates with evaluated unit POC on evaluated base requirements (MSET workspace, computer requirements, etc.).

10.10.1.11.10. (Added) Coordinates with ANG/LGRI on all team issues.

10.10.1.11.11. (Added) Coordinate with evaluated unit POC on EAL list for team members.

10.10.1.12. (Added) Team Chief Responsibilities:

10.10.1.12.1. (Added) Reviews and approves proposed team member list.

10.10.1.12.2. (Added) Team Chief's welcome briefing to the team members.

10.10.1.12.2.1. (Added) Personal appearance.

10.10.1.12.2.2. (Added) Professional conduct.

10.10.1.12.2.3. (Added) Interpersonal relationships.

10.10.1.12.2.4. (Added) Daily meetings.

10.10.1.12.2.5. (Added) Filling out daily observation reports.

10.10.1.12.2.6. (Added) Avoiding conflicts and elevating problems.

10.10.1.12.2.7. (Added) In brief /out brief times and locations.

10.10.1.12.2.8. (Added) Travel voucher processing.

10.10.1.12.2.9. (Added) Local safety issues.

10.10.1.12.2.10. (Added) Special interest focus areas.

10.10.1.12.2.11. (Added) Brief benchmarks and honorable mentions.

10.10.1.12.3. (Added) Conduct daily morning and afternoon team meeting.

10.10.1.12.4. (Added) Conduct daily "how goes it "meetings with MXG/CC.

10.10.1.12.5. (Added) Determines and validates unit findings from team evaluations.

10.10.1.12.6. (Added) Responsible for compiling the report and writing the executive summary.

10.10.1.13. (Added) Travel. The team POC shall provide team members with travel and lodging information. Individual team members are responsible for making their own travel arrangements and when completed, provide the information to the team POC. Completed final travel voucher settlements from finance must be forwarded to ANG/LGRI office BEFORE the unit can be reimbursed funds.

10.10.1.14. (Added) Team Member Qualifications. The Team Chief shall determine the final team composition. Team Qualifications (may be adjusted by the Team Chief):

10.10.1.14.1. (Added) Must be highly proficient in their functional area of expertise.

10.10.1.14.2. (Added) 7-level NCOs or above.

10.10.1.14.3. (Added) Possess a secret security clearance and restricted area badge if required for the performance of duties.

10.10.1.14.4. (Added) Recognized functional expert by superiors and knowledgeable of evaluation procedures.

10.10.1.14.5. (Added) Demonstrates exceptional interpersonal skills.

10.10.1.14.6. (Added) Not have any adverse actions pending.

10.10.1.14.7. (Added) Must have a working knowledge of computers and Microsoft software.

10.10.1.14.8. (Added) Must attend ANG MSET training.

10.10.1.15. (Added) Evaluated Unit Support. At a minimum, evaluated unit support shall consist of the following:

10.10.1.15.1. (Added) Identify a hotel that is reasonably convenient to base and local restaurants within the local per diem lodging rate.

10.10.1.15.2. (Added) Reserve a block of rooms for the “Air National Guard MSET” based on the numbers and dates provided by the Team POC. Team members shall be responsible for calling the hotel and making their own individual reservations using their government credit card.

10.10.1.15.3. (Added) Prepare welcome package that shall be available at the check-in desk when team members arrive at the hotel. As a minimum the package should include:

10.10.1.15.3.1. (Added) Maps of the base and local area.

10.10.1.15.3.2. (Added) Directions from the hotel to the base and from the gate to the workcenter.

10.10.1.15.3.3. (Added) Information on the local area.

10.10.1.15.3.4. (Added) Unit photograph permission/restrictions for MSET.

10.10.1.15.4. (Added) Coordinate with Team POC to ensure that all team requirements are accomplished IAW this instruction.

10.10.1.15.5. (Added) Coordinate with Wing Safety office to provide Safety in-brief.

10.10.1.16. (Added) MSET Workcenter Minimum Support and Requirements.

10.10.1.16.1. (Added) One room large enough to comfortably accommodate 20-25 members of the MSET.

10.10.1.16.2. (Added) Two telephones with commercial and DSN access.

10.10.1.16.3. (Added) Copier or convenient access to one.

10.10.1.16.4. (Added) Facsimile (FAX) machine with commercial and DSN access or convenient access to one.

10.10.1.16.5. (Added) The following documents in hard copy available upon MSET arrival:

10.10.1.16.5.1. (Added) Complete set of current unit Wing and Group OIs.

10.10.1.16.5.2. (Added) Special Certification Roster.

10.10.1.16.5.3. (Added) Awaiting Action and Overdue training listing from CAMS/G081.

10.10.1.16.5.4. (Added) Current automated technical order system product.

10.10.1.16.5.5. (Added) Wing and Maintenance Group key personnel listings with duty titles, email and phone extensions.

10.10.1.16.5.6. (Added) List of all quarterly, monthly, weekly and daily maintenance meetings scheduled during the MSET visit.

10.10.1.16.5.7. (Added) EAL to all access to the flightline, munitions areas, alert and maintenance operations center (MOC) as required. Names, grade, and security clearances shall be provided to the evaluated POC in advance.

10.10.1.16.5.8. (Added) One base and local telephone book.

10.10.1.16.6. (Added) Computer support requirements are as follows:

10.10.1.16.6.1. (Added) Four Computers must be high speed processors, 3.5 and CD-ROM drives.

10.10.1.16.6.2. (Added) Computers must be loaded with current Microsoft Office® packages, Acrobat Reader ®, Internet access, Form Flow, ICS Viewer, guest email account and connectivity to the base LAN system.

10.10.1.16.6.3. (Added) High speed printer with LAN connectivity.

10.10.1.16.6.4. (Added) Convenient access to a color printer.

10.10.1.16.7. (Added) Administrative supplies:

10.10.1.16.7.1. (Added) Box of 8 1/2” x 11” paper.

10.10.1.16.7.2. (Added) Supply of notepads.

10.10.1.16.7.3. (Added) Other supplies as requested by the Team POC.

10.10.3.8.12. (Added) Intake/exhaust inspections.

10.10.3.8.13. (Added) F-15/F-16 Aircraft with F100-PW-100/220/220E 4K Fan Drive Turbine Module, 4th Stage Turbine Blade, Eddy Current Inspection. **NOTE**: Each qualified NDI inspector shall have at least one Personnel Evaluation performed annually.

10.12. ANG QuAD shall be used until QAD is fielded.

10.12.10. May be rated by Maintenance Supervision.

10.13. QA shall publish summaries at least quarterly, may be electronic.

10.15.1.8. (Added) AFREP if applicable.

10.15.2. The PIM is appointed by the QA Superintendent and is assigned to QA and is the wing's aircraft and equipment maintenance focal point for promoting the PIP. The QA Superintendent may elect to delegate day-to-day management of the elements of the PIP.

10.15.2.1. N/A to the UAE owned F-16 block 60 program.

10.15.2.2. Paragraph **10.15.2.2.** and all subparagraphs through 10.15.2.4.2. are N/A to UAE F-16 block 60 program.

10.16. All initial distribution and requisition requirements are sent through QA for processing. Based on requirements, QA sets up TO series initial distribution requirements. This ensures receipt of TCTOs that apply to equipment maintained, owned, or operated within the Wing. If the Wing has implemented the JCALS program, or assumed Wing TO responsibilities, QA shall ensure they are on requirements for all TCTOs series utilized within the Wing. The 162nd FW and LM Aero shall develop written procedures for Technical Publication management for the UAE F-16 block 60 program.

10.16.1.3. Provide a file copy of the TCTO to PS&D.

10.16.7. This list may be published in an electronic format as part of the Weekly Maintenance Plan.

10.16.8. The QA TODO shall inspect other maintenance TODOs/TODAs in the maintenance complex at least every 24 months as part of the Activity Inspection along with performing spot checks of TO files. The TODO must follow-up within 90 days when non-compliance is noted.

10.17.1. For G081 users, the first two characters shall be the base specific logical terminal (LTERM) as dictated by G081 management. The six remaining characters identify the year, and a sequence number. For example, data code is ST for Stewart, next two characters are the year, and the remainder is the OTI issued that year chronologically. Therefore the first OTI issued by Stewart in CY 2004 would be ST040001.

10.17.2. The Quality Assurance Superintendent shall determine crosstell value for OTIs to lead commands for the equipment or MDS.

10.18.1. Monitors compliance of TCTOs and determines evaluation coverage that is directly related to the complexity of the TCTO as well as to the criticality of the system or the component to be modified. QA monitors the quality of the first job and performs kit proofing as required. Report any deficiencies to appropriate agencies. QA is the sole authority for determining applicability.

10.18.3. (Added) Participates in all TCTO planning meetings and shall be notified by the performing workcenter when work is started on the first TCTO, OTI, or modification for aircraft and equipment.

10.19. **Functional Check Flights (FCFs).** N/A to the ANG. All subparagraphs are also N/A. The following only applies to the ANG: The MXG/CC and OG/CC have joint responsibility for the FCF program. The requirement for an aircraft FCF is based on technical data and decisions exercised by commanders at all levels through their maintenance officers. The guidance contained in this instruction is designed to be used in conjunction with the additional guidance contained in the following directives: AFI 11-401; AFI 11-202, Volume 3, AFI 13-201, TO 1-1-300, TO 00-20-1, and applicable -6 and -1 Technical Orders. This instruction does not provide single source guidance for the implementation and execution of the FCF program. **EXCEPTION**: Units with C-21, C-22, C-26, C-130, C-5, C-17, C-38, C-40, E-8C, and KC-135 series aircraft rarely perform FCFs, and are exempt from the following requirements contained in this instruction: initial checkouts, initial certification letters, annual certifications, and FCF currency

requirements. When these aircraft require a FCF, the Operations Group Commander issues temporary written certification designating the most highly qualified crew available. OG/CC, FCF OIC, and QA ensure crews are thoroughly briefed on specific FCF requirements and procedures. File certification letters with the FCF program manager.

10.19.1. Responsibilities. Due to the cross-functional nature of the FCF program, effective development and execution of the program requires close coordination between operations and maintenance. MXG/CC and OG/CC shall appoint specific program managers to oversee the functions of the FCF program that specifically relate to their organization. For the MXG this shall be the QA Superintendent. Jointly established OIs shall be developed and implemented on all FCFs. The MXG/CC and OG/CC are responsible for ensuring compliance with these procedures.

10.19.1.1. (Added) Operations Group FCF OIC. This individual is FCF-qualified in a unit mission aircraft, and can serve as checkout pilot in mission aircraft.

10.19.1.2. (Added) QA, in conjunction with the operations FCF OIC, is responsible for implementing an effective FCF program.

10.19.2. The operations FCF OIC must ensure that the following crew requirements are met.

10.19.2.1. Normally the number of FCF crews does not exceed four per squadron. Units with unique-mission requirements may waive the number of assigned crews at the discretion of the OG/CC. Crew members required to perform duties/events directed in the FCF flight profile are certified on a locally developed certification letter. This certification is accomplished after the crew member performs the initial checkout and meets flying hour requirements.

10.19.2.2. If the necessity arises for an FCF during a TDY when an FCF crew is not available, the OG/CC may issue temporary certification, designating the most highly qualified crew available to perform such duties. In addition, the OG/CC ensures crews are briefed on the provisions of TO 1-1-300 and are completely familiar with local FCF procedures.

10.19.2.3. The initial checkout and annual certification program for applicable crew members consists of, but is not limited to:

10.19.2.3.1. (Added) A comprehensive briefing by the Operations Program Manager on the following:

10.19.2.3.1.1. (Added) Procedures listed in this publication.

10.19.2.3.1.2. (Added) The publications listed in this section.

10.19.2.3.1.3. (Added) Local FCF procedures for the type of aircraft being flown.

10.19.2.3.1.4. (Added) The applicable -6 worksheets.

10.19.2.3.1.5. (Added) FCF procedures for ATD when devices are possessed by the wing.

10.19.2.3.1.6. (Added) Map of local FCF area or route of flight.

10.19.2.3.2. (Added) A complete FCF aircraft flight profile (except helicopters) with a certified FCF pilot.

10.19.2.3.3. (Added) Checkout may be accomplished in conjunction with an actual FCF. A chase aircraft not requiring an FCF or operational check is used for single seat aircraft. Crewmembers for multiple seat aircraft fly a complete FCF profile with an FCF-certified crewmember for the corresponding crew position if aircraft size or seating capability permits.

10.19.2.4. If an ATD is possessed by the wing, a complete ATD FCF profile is flown under the supervision of a certified FCF pilot prior to the aircraft flight.

10.19.2.5. (Added) Additional FCF checkout sortie requirements are determined locally, based on the complexity of the aircraft and the qualifications/proficiency of the prospective FCF crewmember.

10.19.2.6. (Added) FCF pilot currency for single seat aircraft is 120 days. To update currency, FCF pilots may accomplish a complete ATD FCF profile or an actual FCF flight. Non-current FCF pilots must not perform FCF duty's until currency is regained. To regain currency, FCF pilots accomplish a FCF in the ATD with a certified FCF pilot. If an ATD is not possessed by the unit, currency may be regained by accomplishing an academic review of the requirements of Paragraph **10.19.2.3.**, and applicable emergency procedures with a current FCF pilot or operations squadron supervisor. Currency may also be regained by flying an FCF profile with a certified FCF pilot, either as a chase or in the rear seat of a two-seat model (if applicable). If an FCF pilot does not accomplish an ATD or aircraft FCF profile for more than one year, the initial checkout procedures in Paragraph **10.19.2.3.**, must be accomplished.

10.19.2.7. (Added) Any FCF crewmember, who loses AFI 11-401 aircraft qualification for over 6 months, must not perform FCF duties until reaccomplishment of initial checkout.

10.19.2.8. (Added) For single engine aircraft, pilots maintain Simulated Flameout (SFO), and landing currency IAW applicable 11-MDS series guidance. OGs possessing newly assigned aircraft may waive the minimum hourly criteria of this publication (up to one year from the start of unit conversion) and select the most qualified crewmembers for FCFs.

10.19.2.9. (Added) Use the following minimum hourly criteria, including student time, to designate pilots to perform FCF duties.

10.19.2.9.1. (Added) 750 hours total and 200 hours first pilot PAA time.

10.19.2.9.2. (Added) 650 hours total and 300 hours first pilot PAA time.

10.19.2.9.3. (Added) 575 hours total and 400 hours first pilot PAA time.

10.19.2.9.4. (Added) Helicopter pilots designated as FCF co-pilots shall be selected by Unit Commander and must follow minimum qualification criteria listed below:

10.19.2.9.4.1. (Added) Be current and qualified with a minimum of 200 hours total time and 100 hours assigned airframe time.

10.19.2.9.4.2. (Added) Complete unit FCF Training Program.

10.19.2.10. (Added) Flight engineers/flight mechanics must have at least 1250 hours total time and 250 hours PAA time. **EXCEPTION**: Helicopter flight engineers must be current and qualified in type aircraft to be checked.

10.19.2.11. (Added) Other crewmembers are current and qualified in the type aircraft and crew position to be checked.

10.19.2.12. (Added) The crew size for an FCF is the minimum crew necessary to perform required maintenance checks and is never less than the minimum crew as stated in the applicable -1 TO.

10.19.3. Flight Requirements:

10.19.3.1. Do not shut down engines while airborne unless specified in the -6 TO

10.19.3.2. Do not fly FCFs in conjunction with other missions or training requirements, unless waived by provisions in TO 1-1-300.

10.19.3.3. Follow weather conditions contained in TO 1-1-300 at all times unless aircraft are urgently required for operational commitments. Waiver provisions are outlined in TO 1-1-300 for the type and model of aircraft involved.

10.19.3.4. Conduct FCFs during daylight hours only, except for aircraft with four or more engines, unless waived by provisions specified in TO 1-1-300.

10.19.3.4.1. Establish local FCF OIs (jointly developed by maintenance and operations) for any specific local aircraft requirements (that is, configuration), administration, control, and documentation of the FCF, OCF, and high-speed taxi check programs.

10.19.3.5. Fly and report supersonic flights IAW AFI 13-201.

10.19.3.6. Fly FCFs using radar control to the maximum extent possible. Whenever practical, an IFR clearance is filed (except helicopters). In cases where FCF areas are not controlled by ground radar agencies, radar monitoring is used, if available.

10.19.3.7. (Added) Follow aircraft -6 TO warnings and cautions restricting FCF profile at particular phases of the FCF. Local procedures for FCF profiles include the applicable -6 TO restrictions.

10.19.3.8. (Added) Fly FCFs for a single engine change on a two-engine aircraft if that aircraft will next fly an extended over-the-water flight, i.e., overseas deployment. This applies to engines with no operating time since major maintenance. It does not apply to engines obtained from donor aircraft with established operating time.

10.19.3.9. (Added) Require a clean configuration whenever FCFs are flown for flight controls, fuel controls, or engine changes. Do not remove fixed wing pylons, fixed wing tip tanks, and fixed external stores unless they interfere with fuel scheduling, aerodynamic reaction, air loading, signaling propagation, etc.

10.19.4. (Added) Unit Procedures. As a minimum, units establish and publish local OI to include, when applicable:

10.19.4.1. (Added) Fuel Load.

10.19.4.2. (Added) Expanded preflight check by the aircrew.

10.19.4.3. (Added) Ground procedures (compass swing, taxi check).

10.19.4.4. (Added) Radio procedures.

10.19.4.5. (Added) Radar control procedures.

10.19.4.6. (Added) Procedures to enter test area.

10.19.4.7. (Added) Control bailout area.

10.19.4.8. (Added) Control jettison area.

10.19.4.9. (Added) Emergency landing base.

10.19.4.10. (Added) Debriefing procedures.

10.19.4.11. (Added) Procedures to adequately prepare, perform, and debrief ATD FCFs.

10.19.5. (Added) QA:

10.19.5.1. (Added) Monitors all FCFs according to the appropriate -6 technical order, TO 1-1-300, and other pertinent directives.

10.19.5.2. (Added) Notifies maintenance and operations scheduling as soon as possible when requesting FCF crews.

10.19.5.3. (Added) Ensures each FCF crew is briefed on the documentation requirements for the AFTO Form 781 series and the -6 TO FCF checklists, when applicable.

10.19.5.4. (Added) Ensures an information file, may be electronic, for briefing FCF flight crews is maintained. As a minimum, the file contains the following items:

10.19.5.4.1. (Added) Mission profile for each type of assigned aircraft, consisting of checks to be accomplished, presented in consecutive order.

10.19.5.4.2. (Added) OIs concerning FCF procedures.

10.19.5.4.3. (Added) A FCF checklist for each type of assigned aircraft.

10.19.5.4.4. (Added) TO 1-1-300, or memo of TO location.

10.19.5.4.5. (Added) List of authorized FCF crewmembers signed by the Operations Group Commander.

10.19.5.5. (Added) Reviews the FCF checklist and the aircraft forms with the FCF crew during debriefing to determine all requirements were accomplished. Tape recorders may be used IAW AFI 11-206, *General Flight Rules*, to provide detailed accounting of in-flight discrepancies, assist troubleshooting and aid in debriefing. Forwards the completed FCF checklist to the appropriate PS&D for filing in the document file of the aircraft. After corrective action is complete, reviews AFTO Forms 781A for adequacy of the corrective action.

10.19.5.6. (Added) Reviews the AF IMT 2400, *Functional Check Flight Log* or similar automated product, monthly for trends indicating problems requiring further analysis or corrective actions. If an automated product is used, all information currently tracked on the AF IMT 2400 is tracked in the computer.

10.19.6. (Added) When an FCF is required on transient aircraft, QA at the transient base serves as the focal point for coordination between the owning organization, the host operations group, and the transient alert function, as required.

10.19.7. (Added) FCF Aborts. An air abort due to a condition other than the one that generated the FCF is not counted as an FCF non-release, provided the original condition requiring the FCF checked good. Enter new discrepancies on AFTO Forms 781A.

10.19.8. (Added) Waivers. OGs may authorize temporary waivers to this publication, for aircrew qualification, when operational requirements dictate. Permanent waivers, not otherwise granted in this publication, require ANG Director of Operations (ANG/XO) and ANG/LG approval. Requests for permanent waiver of FCF aircrew qualifications contained in this publication are normally submitted through channels to ANG Operations and Training Division (ANG/XOO).

10.20. Fly OCFs when an operational check is listed as a -1 or -2 requirement.

10.23.1.6. Electronic or LAN use is encouraged.

10.24.1. N/A to the ANG. The following only applies to the ANG: QA shall recommend initiating an OTI if the majority of the sampled aircraft show chafing, or the detected chafing is an operational safety hazard.

10.26. (Added) **Maintenance Functions Located in Operations.** When maintenance functions are located in the Operations group (i.e., Transient Alert) QA provides technical support and conducts evaluations.

11.1. The QA superintendent oversees the Group impoundment program.

11.2.4. QA Inspectors may be considered for Impoundment Release Authority.

11.3.11.2.1. (Added) An aircraft with hung ordinance or jammed gun systems.

11.5.7. N/A to the ANG. The following only applies to the ANG: The Impoundment Official selects a team of highly qualified technicians dedicated to determine the cause of the problem that led to the impoundment.

12.1. This chapter is applicable to the 116th ACW active duty personnel.

13.2.1.6. Also procedures for broken tools.

13.2.1.9. A rag is defined as a remnant of cloth purchased in bulk or a standardized, commercial quality, vendor-supplied shop cloth (uniform size and color) used in general industrial, shop, and flight line operations. Paper product towels are not considered rags.

13.2.1.13.2. The OG/CC shall establish procedures, or use MXG OIs, for control of aircrew tools and life support section tool kits dispatched to the flightline.

13.2.1.13.3. Local procedures must, as a minimum, direct a second party or on-duty supervisor inspection of the tool kit. The same individual that signs out a CTK can not sign it back in.

13.3.4. A copy of the MIL must remain with the CTK or equipment kit at all times for inventory purposes.

13.3.4.13. N/A to the ANG. The following only applies to the ANG: Personal issue tools not controlled through CTK procedures are NOT authorized on the flightline, or in any maintenance area (e.g., mini-mag flashlights, leathermans, buck knives, etc.). Mark and control tools or equipment that a workcenter assigns to an individual IAW this instruction. Personally purchased tools are not authorized.

13.3.5. (Added) Expendable hand tools such as blades, apexes, files, and file cleaners consumed during use may be placed on bench stock. However, strict accountability and control procedures are included in unit procedures. If items are not placed on bench stock, the replacement tool procedures in Paragraph **13.9. (Added)** apply.

13.4.1. If using TAS.

13.5.1. TAS is the only authorized software program for tracking tools. ANG units may use manual tracking instead of TAS when the unit's tools are not commingled with the active forces during AEF, contingencies, deployments, etc. Units shall use a chit system, AF IMT 1297, a MAJCOM, or locally approved form must be used for accountability and control of CTKs, equipment, and tools. To identify items manually (not tracked in TAS): Tools, equipment, and CTKs must be etched, stamped, or marked to aid in inventory. Multiple cabinets may be identified as one CTK. The tools or equipment contained in a CTK must be assigned the number of the parent CTK. Small tools or items belonging to a CTK, which cannot be marked (drill bits, allen wrenches, apexes, containers, lids, etc.) are maintained in a container marked with the assigned number and the quantity of tools contained therein. The container is counted as one of the items.

13.7. If established.

13.8.1.1. When a tool/item is discovered missing after an aircraft has taxied the maintenance supervision shall notify the MOC who in turn notifies the pilot and recalls the aircraft, if necessary.

13.9. (Added) **Tool Replacement Procedures.** A stock of spare tools is authorized. These tools are used to replace broken, worn, or missing tools to prevent unnecessary work delays. Spare and consumable tools are high pilferage items, and pose a significant potential for fraud, waste, and abuse. CTK custodians authorize the tools and quantities maintained. Inventory replacement tool stocks quarterly. Use a general-purpose form/or computer program (such as AF IMT 3131, *General Purpose*) to annotate log entries when a tool/ item is added or removed from the inventory stock. During the quarterly inventory, the CTK custodian shall validate the quantity of tools/items within each bin. To aid in accountability, control, and inventory, each tool/item shall be separated by use of individual bins or dividers, and sequentially numbered accordingly. Access to spare tools must be limited to the shift supervisor (or equivalent) and CTK custodian.

13.9.1. (Added) Do not issue replacement tools without a turn-in of the unserviceable tool or documentation indicating the tool is lost and reported accordingly through lost tool procedures. Mark replacement tools with the CTK number prior to issue. If previously issued serviceable tools are to be used as replacement tools, completely de-etch any prior CTK assigned markings.

14.1. At ANG wings assigned with both C-130 and HH-60 aircraft, the procedures located in this chapter shall apply to the C-130 mission. Wing Weapons Managers at combined A-10 and C-130 units shall determine applicability.

14.2.1.1. N/A to the ANG.

14.2.1.2. N/A to the ANG. The following only applies to the ANG: Receives initial and annual recurring load Qualification training, documented on AF IMT 2419, from qualified personnel from the 139 AW/ AATTC, St. Joseph, Missouri for C-130's only, and maintains currency on chaff/flare loading task. For C-5's and C-17's coordinate training with AMC. Once trained, the WTQM develops and administers the unit's chaff/flare load training program.

14.2.1.3. Evaluates and requalifies WTQC annually. **NOTE**: In the event that a unit is initially tasked and has no qualified instructors, it shall be necessary for the WTQM to travel to a unit with qualified trainers. Once the WTQM is trained and qualified they can train and qualify the home station WTQC personnel.

14.2.1.8. Work with Wing Safety or the local explosives safety officer and airfield management to develop an OI for handling chaff/flare-loaded aircraft IAW AFMAN 91-201, and AFI 91-202.

14.2.1.14. N/A to the ANG. The following only applies to the ANG: Provide personnel with initial and recurring load qualification training.

14.2.1.17. N/A to the ANG. The following only applies to the ANG: Develop and coordinate training schedules and provide them to PS&D for inclusion in the appropriate schedule (monthly, weekly, etc.). Provide personnel with initial and recurring load qualification training.

14.7. Operations involving the build-up of chaff/flare magazines must have a minimum crew size of two qualified munitions personnel.

15.1. For the ANG the MOF and AMU PS&D sections are the same and located in the MOF, except for the 116th ACW. The 162nd FW in coordination with LM Aero, GE, and UAE shall develop local written procedures in an OI/Sup addressing all UAE F-16 block 60 program Plans, Scheduling and Documentation requirements.

15.2.1.1. N/A to the ANG except for the 116th ACW active duty personnel.

15.2.1.3. N/A to the ANG except for the 116th ACW active duty personnel.

15.2.2.4. N/A to the ANG. The following only applies to the ANG: Manage the aircraft transfer/depot program. MOF PS&D shall coordinate any changes to the transfer/depot/DFT/CFT programs with AMF PS&D sections and all affected agencies.

15.2.2.6. The MXG/CC may determine which workcenters shall perform this function.

15.2.3.1.1. (Added) Paper MIS products are not required when using Maintenance Scheduling Application Tool (MSAT). Units shall develop procedures to update manual products in the event MSAT and the MIS is not available for extended period of time (i.e., more than 48 hours). Back-up plan must ensure access to the most current paper or electronic version of MIS products used in MSAT, in the event MSAT is not available. The MSAT administrator shall be assigned to MOF PS&D.

15.2.3.7. Use of MSAT is mandatory in ANG units using CAMS.

15.2.4.2. Document the semiannual review on AF IMT 2411, or electronic equivalent.

15.2.4.3. Maintain the TCI and SI matrix using MSAT. The briefing and daily wing meeting is N/A to the ANG.

15.2.4.4. Units shall use MSAT to conduct semi-annual reviews and ensure accurate data in the MIS. Semi-annually review all inspection and time change job standards against all assigned aircraft.

15.2.5.6.1. (Added) Aircraft Maintenance Scheduling Effectiveness (MSE) Rate. The MSE rate is the percentage of scheduled aircraft maintenance events that were completed on or prior to the date printed in the weekly schedule. An event is considered completed when the last step of the actual scheduled event is completed. Examples of this would be the last step listed in the pre-dock work card of a periodic or isochronal inspection.

15.2.5.6.2. (Added) The purpose of the MSE rate is to measure the success of a unit in executing its planned maintenance schedule. Scheduled maintenance events are weighted using a measurement criteria intended to reflect the relative magnitude of the events. **Table 15.1. (Added)**, Scheduled Maintenance Actions, lists the scheduled maintenance actions and their weight factors.

MSE Rate = (Maintenance points earned/ maintenance points possible) X 100.

Air National Guard Standard is 95 percent.

Table 15.1. (Added) Scheduled Maintenance Actions. (Note 1)

ITEM	SCHEDULED ACTIONS	POINTS
1.	Phase Inspection: Periodic (PE) or Isochronal (ISO)	30
2.	Home Station Check (HSC)/Hourly Post Flight (HPO)	20
3.	Time Compliance Technical Order (TCTO)	20
4.	Engine Time Change (Note 2)	20
5.	Aircraft Time Change (Note 2)	20
6.	Special Inspection (Note 2)	15
7.	Wash, Corrosion, Prep, and Paint (Note 2)	15
8.	Delayed Discrepancy (Note 2)	5
9.	Document Review	5
10.	Transfer Inspection or Acceptance Inspection	3
11.	Maintenance and Aircrew Trainers/Static Display	2
12.	Other Scheduled Action (Note 3)	2

NOTES:

1. Points are only earned for scheduled maintenance events on tail numbers printed in the weekly schedule. Use the event completion month as the basis for when to report points possible and earned.
2. Non-PE, ISO, HSC, or HPO.
3. Action not listed in the first 11 categories.

15.2.5.7. (Added) Assists workcenters in assigning ID numbers and automated tracking of inspection criteria.

15.2.5.8. (Added) Ensure that all borescope inspections are loaded against the engine and not the aircraft.

15.3.5. DD Form 2861, *Cross Reference*, shall be used in place of Optional Form 21, *Cross Reference*.

15.4.2. To prevent classification, do not include items such as wartime bed down locations, OPLAN title, A-hour (SIOP) timing, or no-later-than timing from OPLANs.

15.6. N/A to the ANG. All subparagraphs in section **15.6.** are also N/A to the ANG.

15.8.3. The schedule can be published electronically.

15.10.3.3. These items shall be used to track maintenance scheduling effectiveness.

15.10.3.9. The MXG/CC and OG/CC shall develop specific procedures to record and coordinate changes to the weekly schedule using an AF IMT 2407 or locally devised or computer generated products as long as they provide all the information contained in the AF IMT 2407.

15.10.3.10.2. IAW MXG/CC and OG/CC procedures.

15.12.1.3. N/A to the ANG except for the 116th ACW.

15.12.2.2.9. **NOTE** : For CAMS units only, the PS&D monitor shall coordinate with MDSA to ensure the CAMS/REMIS TCTO synchronization program is run monthly.

15.14.2. Using CAMS screen 690.

15.14.4. Discrepancies shall be briefed at the post dock.

15.15.3.6. Cartridge Actuated Device (CAD) / Primary Actuated Device (PAD) inspections are to be accomplished on newly assigned aircraft, and upon those returning from depot/PDM, (except when the aircraft was input for paint only).

16.1. In cases where the function is not represented by full time personnel, the MXG/CC shall appoint a full time representative. In cases where a 2W100 Chief Master Sergeant is not assigned to the Maintenance Group, the MXG/CC may request a waiver for the most qualified 2W1 SMSgt to serve as the WWM for up to 24 months. Submit waivers to ANG/LGMW for approval.

16.1.6. If this occurs and cannot be corrected within 60 days, the following information is sent by secure message, through the MXG/CC, to the ANG/LGMW.

16.1.7. Also coordinates with the AMXS Weapons Element supervisor. They as a collective group shall develop the units SCL, utilizing the UCML as the basis of information.

Table 16.2.

Add F-15 A/B to F-15 C/D column. Also add two each AIM-7 for ADF F-16 units with AIM-7 capability.

16.1.16.1. N/A to the ANG. The following only applies to the ANG: Weapons release reliability rates shall be considered 100 percent unless there is a documented weapons malfunction reported by the aircrew. Rates are calculated by dividing the number of successful releases by the number of pilot reported attempts (Goal: 99 percent).

16.1.16.2. N/A to the ANG. The following only applies to the ANG: The gun fire-out rate shall be considered 100 percent unless there is a documented gun system malfunction reported by the aircrew. Rates are calculated by dividing the number of successful gun sorties by the total number of gun missions flown (Goal: 98 percent).

16.1.22. N/A to the ANG.

16.1.25. Provides quarterly manning, equipment and tester status to MAJCOM via e-mail or web site.

16.1.34. N/A to UAE owned F-16 block 60 equipment.

16.2.2.8. Provide printed products to weapons section chiefs semi-annually.

16.2.2.19. N/A to the ANG.

16.2.2.21. CTKs shall be maintained as directed by the WWM.

16.2.2.22. (Added) Maintains an automated system to depict load crew status. As a minimum, the load crew status system reflects the formed crews by number and crew member position, by individual, the next Minimum Proficiency Requirement Loading (MPRL) due date for each munitions, quarterly evalua-

tion due date, preload due date (if applicable), competent familiarity loading (CFL) due date for each type of munitions, and training due date for each weapons task qualification.

16.3.8. May augment wing inspection/evaluation teams during local exercises to assess munitions loading capabilities and activities.

16.5. Lead Crews are optional for the ANG.

16.8.3. When a new PM or SM is designated on the UCML/TTML, crews are certified or competent familiarity loading (CFL) trained within 90 days after receipt of training items.

16.8.7. IAW Chapter 3 of this instruction.

16.9.1. Also HH-60.

16.12.1.3. N/A to the ANG. The following only applies to the ANG: For initial certification a minimum of two certifying officials are required to evaluate three member load crews (if only one crew member is not certified, then, only one certifying official is required). For MPRLs a minimum of one certifying official is required to evaluate three member load crews. QEs require a minimum of two certifying officials (one must be a member of the LSC).

16.12.1.7. (Added) All certified load crews perform Minimum Proficiency Requirement Loading (MPRL) monitored by designated lead crew members or LSC members. The LSC monitors lead crew proficiency loads. When the LSC performs proficiency loadings, the loads are not required to be monitored. Post-load inspections do not meet these proficiency requirements.

16.12.2.2. MPRLs are performed quarterly in the ANG.

16.12.2.3. **NOTE** : Member must receive academic training within 60 days of returning to duty.

16.12.3. N/A to the ANG. The following only applies to the ANG: AGM-65 tasked units shall load train using both the LAU-88 and LAU-117 launchers (accomplish quarterly loading requirements by alternating launchers e.g., load the LAU-117 one quarter and the LAU-88 the next). WS shall provide annual familiarization training on all procedures, and equipment required to accomplish single, preload, and unbalanced configurations. (**NOTE**: Some units may only possess one or two LAU-88s for WLT. These WLT assets are provided to units for training in support of deployed locations/taskings.)

16.12.7. If AEF tasked.

16.14. N/A to the ANG. The following only applies to the ANG: **Minimum Proficiency Requirement Loading (MPRL).** One half of the munitions family groups (MFG) for which an individual is certified must be loaded quarterly to maintain certification and provide evaluation of load crew proficiency (see **Table 16.6. (Added)** Example of a MPRL Schedule).

Table 16.6. (Added) Example of a MPRL Schedule.

1st Quarter (Jan/Feb/Mar)	2nd Quarter (Apr/May/Jun)	3rd Quarter (Jul/Aug/Sep)	4th Quarter (Oct/Nov/Dec)	Certified MFGs:
QE = AIM 9	QE = CBU89	QE = AGM65	QE = MK84HD	AIM 9/7/120 MK 82/84/LD/HD CBU 87/89/97/103 AGM 65 GBU 10/12/24
Load 1 = QE Load 2 = MRPL (82HD/AGM 65) Load 3 = MPRL CBU 87	Load 1 = QE Load 2 = MPRL (AIM120/GBU 10)	Load 1 = QE Load 2 = MPRL Load 3 = MPRL CBU87	Load 1 = QE Load 2 = MRPL (AIM9/GBU12)	

16.14.3. Certified ANG Load Crew Chiefs may perform MPRLs in any position provided they load under supervision of LSC/Lead Crew using inert training munitions only. This stipulation applies at home station only. No MPRL credit shall be given to those individuals during evaluations unless loading in the position that they are certified. This deviation from policy enables units to have flexibility to evaluate remaining crew members when a member may not be available to form a full crew and should not be used for convenience, but more so a necessity. Schedule crew members into load training for quarterly loads.

16.14.5. (Added) For those munitions that no training assets exist (CBU-97, CBU-105, M129, etc.) difference training shall be provided prior to initial certification and during annual refresher academics training.

16.14.6. (Added) Load crews in air defense/air superiority units perform proficiency loads quarterly using all committed munitions.

16.15. Certified ANG Load Crew Chiefs may perform QEs in any position provided they load under supervision of LSC/Lead Crew using inert training munitions only. This stipulation applies at home station only. No QE credit shall be given to those individuals during evaluations unless loading in the position that they are certified. This deviation from policy enables units to have flexibility to evaluate remaining crew members when a member may not be available to form a full crew and should not be used for convenience, but more so a necessity. Decertify load crews failing to accomplish quarterly evaluations on all munitions within a family group unless exempted IAW provisions in this chapter.

16.15.1. The WWM, designated individual, or WS superintendent may monitor LSC proficiency loads.

16.15.1.6. LSCs may evaluate loading operations conducted during deployments, exercises, or contingencies as QEs at the discretion of the WWM.

16.18. DLO are not authorized in the ANG. All subparagraphs of **16.18.** are also N/A to the ANG.

16.20.2. For rescue units, these can also be a helicopter engineer or an aerial gunner.

16.20.2.3. N/A to the ANG. The following only applies to the ANG: Pyrotechnics: Load/unload.

16.20.2.7. Training shall be tracked in MIS or AF IMT 797.

16.20.2.8. All helicopter gun systems.

16.20.2.8.1. (Added) Install/remove and checkout all helicopter gun systems.

16.20.2.9. (Added) Install/remove pre-loaded SUU-25 dispensers.

Table 16.3.

AIM–7, AIM-9, AIM-120 are members of the same family group.

16.22. (Added) **Air Defense Guidance:** (Includes North American Aerospace Defense (NORAD) and Homeland Defense), as applicable.

16.22.1. (Added) Air Defense Units shall develop Force Generation (FG) plans, and munition employment plans to cover local and deployed operations. A munition employment plan may be included as an annex to the FG plans.

16.22.2. (Added) Air Defense Units MXG/CC or designated representative shall decide what partial loads may be accomplished on aircraft that are not fully loaded during FGs.

16.22.3. (Added) Air Defense Units during FG exercises, missile safety devices may be removed. Prior to an aircraft being placed on alert, units located on civilian airports may leave missile safety devices installed.

16.22.4. (Added) Air Defense Units generated aircraft, without aircrews assigned; do not require missile safety devices to be removed. During FGs, qualified aircrews and ground crews may remove and install aircraft safety pins and missile safety devices.

16.22.5. (Added) Detached Alert Detachment (DAD) Training Responsibilities and Load Crew Requirements:

16.22.5.1. (Added) Certification and training of 2W1X1 load crew members shall be the same as home station standards.

16.22.5.2. (Added) Non 2W1X1 weapons load crew members may be assigned. Certification and training of non 2W1X1 augmentees must be accomplished as follows:

16.22.5.2.1. (Added) Augmentees must possess an AFSC 2A35X or 2A65X.

16.22.5.2.2. (Added) Augmentees must be a SSgt or higher and have a minimum five years MDS experience.

16.22.5.2.3. (Added) Augmentees must successfully complete CDC 2W151.

16.22.5.2.4. (Added) WWM must submit and receive an approved waiver prior to any formal certification. Waiver shall be coordinated through ANG/LGMW and approved from Headquarters Air Force Munitions, Missiles and Space Plans and Policies Division (HAF/ILMW) for non-2W loading augmentees upon completion of the CDC 2W151. Approved waivers shall be valid for a period not to exceed 12 months.

16.22.5.2.5. (Added) All of the above requirements must be satisfied prior to any academic or practical load crew training.

16.22.5.3. (Added) The most qualified 2W171 at the DAD shall be appointed as a member of the parent LSC, and initially certified/evaluated as a load crew chief by the WWM or designated official. The WWM shall determine the appropriate evaluation interval.

16.22.5.4. (Added) Initial certification of other crew members may be accomplished by the parent unit LSC/lead team member. Crew members may be used to load in other positions at the discretion of the load crew chief. Dual certification is authorized.

16.22.5.5. (Added) Load crew training and certification must be documented and routed to the parent unit LSC and returned to the DAD for filing.

16.22.5.6. (Added) Alert aircraft launches and recoveries, to include arm/dearm of loaded munitions, may be performed by any task qualified aircraft maintenance personnel provided the following conditions are met:

16.22.5.6.1. (Added) Initial and annual academics.

16.22.5.6.2. (Added) Initial and annual qualification training using the applicable -100 checklist.

17.3.1.1. Refer to ANGI 10-401, *Air National Guard Unit Type Code Management.*

17.3.1.5. ANG Deployments Division (ANG/XOX) conducts ANG Aviation Maintenance and ECS sourcing conferences for all AEF pairs.

17.3.1.6. ANG/XOX conduct ANG Aviation Maintenance and ECS sourcing conferences for all AEF pairs.

18.1. N/A to the ANG. All subparagraphs of **18.1.**, are also N/A to the ANG.

18.2.1. N/A to the ANG. The following only applies to the ANG: Maintenance Supervision recommends individuals in their primary AFSC based on their experience and technical expertise regardless of their assigned skill position through their chain of command. Seven-skill level personnel may be certified outside their primary AFSC only when specific CUT task qualification is documented in personnel training records. The MXG/CC approves individuals for inclusion on the SCR.

18.2.2. File copies of approved waivers (letter, local form, AF IMT 2426, or e-mail, etc.) must be maintained by maintenance supervision or equivalent until the SCR is updated.

18.2.3. The MXG/CC may add other mandatory critical tasks or inspections they deem necessary.

18.2.4. N/A to the ANG. The following only applies to the ANG: SCR Documentation. Element and/or workcenter supervisors must review each individual's qualifications prior to recommending approval to perform SCR tasks through their chain of command. The AF IMT 2426, *Training Request and Completion Notification*, or locally approved form is used to add or remove an individual to the SCR. Maintenance Supervision routes the recommendation to the QA Superintendent. The QA Superintendent reviews and verifies the request for currency, qualification and applicability and forwards to the MXG/CC. Once approved by the MXG/CC, the individual is authorized to perform the tasks indicated. On approval, the Training Management function, loads the approved name into the MIS. Element and/or workcenter supervisors retain their copy of nomination until they verify proper loading.

18.2.5. This may be in either through hardcopy or MIS format.

Table 18.1. N/A to the ANG. The following only applies to the ANG: Mandatory Special Certification Roster (SCR) Items and Prerequisites.

Item	Mandatory SCR Item Titles	Prerequisites
1.	All systems Red-X, (except egress, welding, munitions).	Maintenance officers and SNCOs (7-skill level or higher) may clear "all systems" Red X conditions.
2.	Engine Run Certifier.	The most qualified 7- or 9-level 2A6X1A/B, 2A5X1/2, 2A3X3X, holding the rank of MSgt or above. Minimum of one year engine run experience on the applicable MDS and engine TMSM. High/low power. The MXG/CC may waive highly qualified TSgts.
3.	Red X downgrade.	Maintenance officers and senior NCOs (7-skill level or higher) may downgrade Red X conditions.
4.	All Systems IPI (except egress, welding, munitions).	Maintenance officers and SNCOs (7-skill level or higher) may clear and perform "all systems" IPIs.
5.	Exceptional Release (ER).	Maintenance officers and SNCOs (7-skill level or higher) (See Note 4).
6.	Aircraft Intake/Exhaust Certifier.	7- and 9-level technicians with AFSCs 2A3X3, 2A5X1X, 2A5X2, and 2A6X1X. Successful completion of formal training and practical evaluation by a certifier.
7.	Flexible/rigid Borescope Certifier.	7- and 9-level technicians with AFSCs 2A3X3, 2A5X1/2, and 2A6X1X.
8.	Blade Blending Certifier.	Must have completed appropriate training. 7- and 9-level Aerospace Propulsion (2A6X1X), or Aircraft Maintenance (2A3X3X) Aircraft Maintenance (2A5X1X) and Helicopter Maintenance (2A5X2).
9.	Red-X-by Primary AFSC (PAFSC) and MDS (i.e., Clear Red X F-16 Electro/environ, Clear Red X F-16 Avionics…).	NCOs (7-skill level or higher). Selected 5-level personnel in the rank of SRA or higher may be authorized clear Red X conditions when the Squadron/flight commander requests the 7-skill level requirement be waived. (See Notes 2 and 3).
10.	IPI - by PAFSC and MDS (i.e., Sign IPI F-16 Electro/environ, Sign IPI F-16 Avionics…).	NCOs (7-skill level or higher). Selected 5-level personnel in the rank of SRA or higher may be authorized to perform IPIs when the Squadron/flight commander requests the 7-skill level requirement be waived. (See Notes 2 and 3).

Item	Mandatory SCR Item Titles	Prerequisites
11.	Red-X and/or IPI - limited (per each MDS), for tasks outside PAFSC through cross-utilization training or limited tasks within the PAFSC.	NCOs (7-skill level or higher) may be authorized to perform these tasks outside their PAFSC only when specific CUT task qualification is documented.
12.	MICAP Approval.	MSgt or higher, minimum 7-level.
13.	NRTS and Serviceability Tag.	NCOs (7-skill level or higher). Selected 5-level personnel in the rank of SRA or higher may be authorized to sign NRTS and serviceability tags when the Squadron/flight commander requests the 7-skill level requirement be waived. (See Notes 1 and 2).
14a.	Engine run by MDS and engine type; low power.	SrA or higher, minimum 5-skill level with a minimum of six month time on weapon system. Successful completion of all three phases of the engine run certification program.
14b.	Engine run by MDS and engine type; all power settings.	SrA or higher, minimum 5-skill level with a minimum of six month time on weapon system. Successful completion of all three phases of the engine run certification program.
15.	Blade Blending.	5-, 7-, and 9-level personnel with AFSCs 2A3X3, 2A5X1/2, and 2A6X1X.
16a.	Hot Refuel supervisor "A" member.	Minimum 5-skill level. Individual shall be a refuel task qualified, capable of supervising hot refuel crew, possess an aircraft maintenance AFSC 5-level qualification and one year of flightline aircraft maintenance experience. Successfully complete all three phases of “HOT” training.
16b.	Hot Refuel crew "B" member.	Minimum 5-skill level. Refuel crew "B" member. Individual shall be refuel task qualified, possess an aircraft maintenance AFSC, and one year of flightline aircraft maintenance experience. Successfully complete all three phases of “HOT” training.
16c.	Hot Refuel Fuels specialist 2F0X1, "C" member.	Minimum 5-skill level in AFSC 2F0X1 and shall be refuel task qualified. Successfully complete all three phases of “HOT” training.
16d.	Additional Hot Refuel crew "D" member.	Minimum 5-skill level. Individual must be refuel task qualified, possess an aircraft maintenance AFSC, and have one year of flightline maintenance experience. Successfully complete all three phases of “HOT” training.

Item	Mandatory SCR Item Titles	Prerequisites
16e.	Hot Pad supervisor.	Individual shall possess a 5-level or higher qualification in an aircraft maintenance AFSC and is hot/aircraft-to-aircraft refueling supervisor "A" member qualified. Successfully complete all three phases of 'HOT" training.
17a	Hush House (Test cell) operator.	Be at least a SrA with AFSC 2A6X1A/B or civilian equivalent. Must have a minimum of 6 months' Hush House experience. When the Squadron/flight commander has requested the seven-skill level requirement be waived, the MXG/CC may authorize senior airman possessing a 5-skill level and a minimum of 6 months experience on the applicable TMSM,
17b	T-9/T-10 sound suppressor fire control panel operator.	Be at least a SrA with AFSC 2A6X1A/B or civilian equivalent. Must have a minimum of 6 months' T-9/ T-10 sound suppressor fire control panel operator experience. When the Squadron/flight commander has requested the seven-skill level requirement be waived, the MXG/CC may authorize senior airman possessing a 5-skill level and a minimum of 6 months experience on the applicable TMSM
18.	Engine inlet/exhaust inspections.	Only certified 2A3X3, 2A5X1/2, and 2A6X1X 5, 7-, and 9-skill level technicians or civilian equivalents may perform these inspections. Successful completion of appropriate training and practical evaluation by a certifier.
19.	Flexible/rigid borescope inspections.	5-, 7-, and 9-level technicians with AFSCs 2A3X3, 2A5X1/2, and 2A6X1X.
20.	Concurrent servicing operations-Chief Servicing Supervisor. (Large frame aircraft).	Minimum 5-skill level with a minimum of one year weapon system experience.
21.	Concurrent Servicing Supervisor (CSS) for SGO (A-10, F-15, F-16).	Minimum 7-skill level 2AXXX or 2WXXX AFSC with a minimum of one-year experience on the MDS.
22.	Aircraft to aircraft ground refueling.	Minimum 5 - skill level with a minimum of one year weapon system experience.
23.	Weight and Balance (W&B) Certified.	SSgt or higher 2AXXX or 2WXXX AFSC with a minimum of one year time on weapon system. Completed training requirements IAW 1-1B-50. Recommendation from the W&B Authority.

Item	Mandatory SCR Item Titles	Prerequisites
24a.	Impoundment Authority.	Delegation of this authority will be limited and appointed by the MXG/CC.
24b.	Impoundment Release Authority.	Delegation of this authority will be limited (Level shall be no lower than Maintenance Supervision).
25.	APU Operation.	Successful completion of an aircraft APUs/GTCs one-time course.
26.	Evaluator Proficiency Evaluation (EPE).	QA inspectors, whether permanent or augmentees, require initial qualification on EPEs. QA augmentees require an annual EPE on a personnel evaluation or technical inspection.
27.	Engine Trim Supervisor.	Refer to Chapter 18.
28.	Engine Trim Box Operator.	Refer to Chapter 18.
29.	Engine Fan Balance Vibration Analyzer Operator.	Refer to Chapter 18.
30.	Calibration Limitation Approval.	SSgt or higher, minimum 7-skill level (or civilian equivalent)
31.	Crash Recovery Team Chief.	Be a SNCO (MXG/CC may waive grade requirement).
32.	WTQM-Weapons Task Qualification Training Manager.	Minimum 7-skill level 2A1X7, 2AXXX, or 2WXXX, generally a 2A1X7.
33.	WTQC-Weapons Task Qualification Crew.	Minimum 5-skill level 2A1X7 or 2AXXX, generally a 2A1X7.
34.	Hydrazine Response Team Member.	AFSC 2A6X4 or as appointed by the MXG/CC and must have task certification.

NOTES:

1. Munitions inspectors who are trained and certified may annotate serviceability tags for munitions items (TO 11A-1-10, *General Instruction-Munitions Serviceability Procedures*).
2. Waived 5-level personnel may perform the assigned certification only in their primary AFSC. The number of waived 5-skill level personnel should be closely monitored and kept to the minimum required to accomplish the maintenance mission.
3. For Egress only, additional requirements contained in AFI 21-112, must also be satisfied prior to certification.
4. If local conditions require assignment of other than maintenance officers and senior enlisted to sign aircraft Exceptional Releases/Conditional Releases, the MXG/CC must request a waiver from ANG/LGMM. In accordance with provisions in TO 00-20-1, waiver requests must: (1) Fully justify need for the waiver; and (2) Identify actions being taken (or planned) to resolve the problem.

18.6. **Hanger Queen Aircraft.** N/A to the UAE F-16 block 60 program.

18.6.3.2. The daily wing standup is not applicable to the ANG. ANG Hanger Queen Category 1, 2, 3 will be reported with comment at web site: (**https://logistics.ang.af.mil/LGM/HangarQueens**) (requires an account (user ID and password) available on this site). ANG/LGM will report Category 2 and 3 Hanger Queen status to the Air Staff.

18.6.3.3. The daily wing standup is not applicable to the ANG. ANG Hanger Queen Category 1, 2, 3 will be reported with comment at web site: (**https://logistics.ang.af.mil/LGM/HangarQueens**) (requires an account (user ID and password) available on this site). ANG/LGM will report Category 2 and 3 Hanger Queen status to the Air Staff.

18.9.1. F-16/F-15 Aircraft Intake Inspections. An engine intake inspection is required between all sorties. If this can not be accomplished while aircraft are off station, and no qualified personnel are available to perform the inspection, the aircrew must document in the AFTO Form 781A, on a Red Dash, that the Pre-flight, Post Flight, or Thru Flight inspection is overdue, and the reason for non-accomplishment (no tech data, no qualified personnel, etc.). The MXG/CC shall determine in an OI if intake inspections are required after each engine operation (i.e., taxi, INS alignment, sortie cancellation, abort, etc.)

18.9.4. Training should be conducted on an uninstalled engine to better familiarize each student with engine forward section components.

18.9.5. CETS must not be used to certify.

18.9.6. (Added) QA shall evaluate engine intake/exhaust inspections as part of the MSEP.

18.11. Also Rigid Borescope.

18.11.1. General. All units maintaining engines/helicopter gear boxes with a TO requirement to use a borescope, and those that do not have a TO requirement to use a borescope but do so to enhance inspections, must have a comprehensive training program established.

18.11.3. Maintenance training, in coordination with SMEs shall develop and manage training. Roving Reps/CETS may be used as alternate instructors.

18.11.4. Engine CETS and Roving Reps shall train certifiers; however, the certifying officials must be certified by the MXG/CC. Certifying officials shall then train and certify the remaining qualified personnel. Units that do not have practical access to CETS or Roving Reps, the unit certifier shall complete the local training course and be appointed by the MXG/CC, based on their technical expertise, knowledge, and experience on the engine.

18.11.5. The 120-day proficiency shall be tracked through MIS or a locally developed method by the workcenter supervisor or designated representative.

18.11.6.3.1. 120 day proficiency requirement is applicable.

18.11.6.3.2. N/A to the ANG.

18.12.1. **EXCEPTION** : T56/T64/T400/T700 units shall have a training program for blade blending, but are not required to maintain proficiency.

18.12.3. Maintenance training, in coordination with SMEs or TD shall be responsible for management and development of the blade blending training program.

18.12.4. MXG/CC shall select maintenance instructors, engine CETS or Roving Reps to provide training.

18.12.5. After receiving training by engine CETS/Roving Representatives and having performed a blade blending demonstration, certifying officials must be certified by the MXG/CC.

18.12.11. (Added) Personnel who become decertified must receive initial training and exhibit proficiency before being placed back on the SCR.

18.17.4.2. N/A to the ANG. The following only applies to the ANG: Site Certification. Hot pit refueling sites must be certified in accordance with TO 00-25-172 and this instruction including **Table 18.2. (Added)**, Hot Refueling Training/Certification Requirements. Certification involves training a cadre of instructor personnel and approving specific hot refueling sites. After initial ANG certification, unit commanders document by position, a unit certification team to recertify existing hot refueling sites and to approve additional on-base and deployment location hot refueling sites. The base site certification team consisting of the following:

18.17.6.2. Forward record copies to ANG/LGMM.

18.17.7.1. Unit checklists shall be reviewed by ANG/LGMM representative.

18.17.13.1. The MXG/CC designates a unit OPR for hot refuel training.

Table 18.2. (Added) Hot Refueling Training/Certification Requirements.

Position	Required Training	Conducted by Whom	Do What	How Often	Special Requirements
QA T/E/C	I, II, III	Qualified T/E/C or ANG Certification Team	Train Evaluate and Certify	Annually	Evaluation by QA
QA Augmentee T/E/C	I, II, III	QA T/E/C	Train Evaluate and Certify	Annually	Evaluation by QA
Hot-Pad Supervisor	I, II, III	QA T/E/C or QA Augmentee T/E/C	Supervise or Perform as "A" Member	Two Multiple Hot Refuels Annually	Annual Evaluation QA T/E/C or QA Augmentee T/E/C
Hot Refuel A, B, C, D Member	I, II, III	QA T/E/C or QA Augmentee T/E/C	Perform in any Qualified Position	Two Hot Refuels each 180 days, ("C" only – Annually)	Annual Evaluation QA T/E/C or QA Augmentee T/E/C
Decertified Hot Pad Supervisor	Repeat II, III	QA T/E/C or QA Augmentee T/E/C	Supervise or Perform, as "A" Member	Two Multiple Hot Refuels Within180 Days of Decertification	None
Decertified A, B, C, D Member	Repeat II, III	QA T/E/C or QA Augmentee T/E/C	Perform	Two Hot Refuels Within 180 Days of Decertification	None
Decertified QA T/E/C or QA Augmentee T/E/C	Repeat II, III	QA T/E/C or QA Augmentee T/E/C	Perform, Instruct, and Certify	Two Hot Refuels Within 90 Days of Decertification	Evaluation by QA
All other Decertified Personnel	Repeat I, II, III	ANG Certification Team	Perform	N/A	Determined Case-by-Case ANG Certification Team

Legend: T/E/C - Trainer/Evaluator/Certifier

18.20.3. Situational awareness of high-velocity air, moveable surfaces, high-pressure fluids, electrical shock, and other specific system hazards, must be stressed to ensure personnel and equipment safety.

18.20.5. (Added) Inlet and/or area inspection must be completed, as applicable, prior to start.

18.21.1. As a minimum this must be accomplished annually and tracked in the ANG self-inspection data-base, when established.

18.21.2. ANG C&SRLs shall be used as a minimum to establish the program. Results collected under this program shall be provided to Quality Assurance for archiving and validation.

18.21.2.3. In addition to ANG C&SRLs checklists, use locally developed checklists tailored to specific unit requirements if needed.

18.22.1. ANG units shall contact AMC/LGM when a Ramp Inspection is required.

18.23.2.14. No personally purchased communications devices shall be allowed on the flightline or hanger areas (cell phones, pagers, etc.).

18.23.2.20. (Added) The MXG/CC and OG/CC in coordination shall establish a lost object program.

18.23.3.1. Fill screw holes with a sealant to prevent screws from backing out or as an option staking these screws in order to prevent the screw from backing out.

18.23.8.2. Perform spot checks of selected areas monthly.

18.23.9.3.3. Report this type of damage according to AFI 91-204.

18.23.11.5.1. N/A to the ANG. The following only applies to the ANG: Dropped Object Reporting. Unit MXG/CC shall ensure maintenance personnel notify the safety office of dropped object incidents. ANG/LGMM shall maintain a database on aircraft dropped objects. Reports must be submitted via the Internet at: (**https://guardian.drc.com/home/homeLG.asp**). The unit Dropped Object Monitor is responsible for entering dropped object data into the website. This requirement is for trend and tracking information only, and is in addition to the dropped object operational reports required in AFMAN 10-206 and AFMAN 10-206/ANG Sup 1, *Operational Reporting*.

18.23.11.5.2. N/A to the ANG. The following only applies to the ANG: Input to the ANG dropped object website must be made within five duty days after the occurrence. The following subparagraphs are included in the ANG web site.

18.24.1.2. Prior to base departure for OCONUS Missions, all deploying aircraft must perform and pass Radar Warning Receiver operational check out. When operating in contingency status, OCONUS Theater procedures for Radar Warning Receiver Testing must be followed.

18.26.1. Aircraft engine motoring must only be performed by qualified engine run personnel. **EXCEPTION**: HH-60 maintenance personnel qualified through OJT may motor engines as long as the rotor brake will prevent the rotors from turning. The MXG/CC is responsible for ensuring an effective engine run certification program is developed.

18.26.1.1. N/A to the ANG. The following only applies to the ANG: The MXG/CC shall appoint a Unit Engine Run Program Manager, preferably within the engine shop, for the management and development of the engine run certification program. Maintenance training, in coordination with SMEs, shall administer the tests and maintain the engine run certification test question bank. Tests may be automated.

18.26.2.5. N/A to the ANG. The following only applies to the ANG: Qualified in normal and emergency brake system operation.

18.26.2.8. (Added) Have completed the appropriate egress familiarization course.

18.26.3. CETS reps are not certifiers.

18.26.5.1.2. Also normal emergency brake system operation, and emergency aircraft egress.

18.26.5.1.6.2. The normal procedures test shall include 30 questions as a minimum. Questions must include limitations, responses to abnormal conditions, communications and precautions (warnings, cautions, and notes). The questions may be multiple choice or fill-in-the-blank.

18.26.5.3. The certifier must maintain visual contact and voice communication via the intercom system. For large aircraft, the certifier must be in the cockpit.

18.26.5.3.8. (Added) The student must successfully complete a test developed from engine run technical data, on emergency and normal operating procedures. This test shall consist of a minimum of 30 questions and must be different than the Phase 1 test. The minimum passing score is 100 percent on emergency procedures, and 90 percent on the remainder of the questions, corrected to 100 percent. Failure to achieve a passing score requires further training before re-testing. Use a new set of questions when re-testing.

18.26.5.3.9. (Added) Accomplish at least two engine runs (engine start to engine shutdown) to ensure that the individual is proficient and to confirm the adequacy of Phase 2 training. Failure to demonstrate proficiency during the practical evaluation requires further training based on the certifying official's determination of deficiencies. Certify individuals after successful completion of Phase 3 training and a minimum time of six months on the MDS. **NOTE**: For vertical lift aircraft, maintenance personnel are not authorized to operate installed engines above ground idle and are not permitted to start and run-up vertical lift aircraft that will not operate without rotor. On rotary wing aircraft, simulator or CPT training is not required for initial engine run qualification.

18.26.6. The aircraft operator has the primary responsibility for the overall safety of the trim operation.

18.26.7.4. Must be approved by the MXG/CC.

18.26.10.1. (Added) Engine runs. Individuals must perform one engine run every 90 days and successfully pass a written emergency procedures test every 6 months to maintain proficiency requirements for maintenance personnel authorized to operate engines.

18.26.10.1.1. (Added) All maintenance personnel required by technical data to occupy the cockpit during maintenance runs are given credit for running an engine. Workcenter supervisors and individual engine operators are responsible for ensuring that they meet this requirement.

18.26.10.1.2. (Added) The emergency procedures test is tracked in the MIS and requires a 100 percent score to pass.

18.26.10.1.3. (Added) Personnel who fail to pass the six month emergency procedures test shall not operate engines until they meet testing requirements. Supervisors determine if training is required before re-testing.

18.26.10.1.4. (Added) Personnel who go overdue any engine run proficiency requirement may remain on the SCR but shall not operate engines until recertified by a engine run certifier and the proficiency requirements are met. The extent of the recertification shall be determined locally or by the certifier.

18.26.10.2. (Added) Trim box operation. Supervisors shall evaluate and re-certify personnel semiannually.

18.26.10.3. (Added) APU operation. All personnel who operate aircraft APUs/GTCs must complete a one-time course.

18.26.11. Maintenance personnel shall only taxi aircraft with ANG/LG/XO approval and have completed a locally developed qualification course including marshaling. Personnel authorized for taxi must com-

plete at least one taxi every 90 days to maintain proficiency. A qualified taxi instructor must re-evaluate personnel not maintaining proficiency before they perform their next aircraft taxi.

18.26.12. The Unit Engine Run Program Manager, in coordination with Quality Assurance and Maintenance Training, shall develop the engine run tests. Engine run certification tests are controlled items and must be handled IAW AFI 36-2201, and administered only by Maintenance training or QA personnel if Maintenance training is not available.

18.26.12.1. (Added) Maintenance training shall maintain the standard test bank for the applicable system(s). As a minimum, it must consist of 75 normal procedure questions, and one question per boldfaced emergency procedures as identified in technical data. The tests shall be developed from the test bank. Both the normal and the emergency tests must be administered closed book.

18.26.12.2. (Added) The normal procedures test must include 30 questions as a minimum. Questions must include limitations, responses to abnormal conditions, communications and precautions (warnings, cautions, and notes).

18.26.12.3. (Added) Emergency procedures test must be fill-in-the-blank.

18.26.14.1. N/A to the ANG.

18.26.16.5. Must perform one engine run every 90 days.

18.26.17. Add T-10 sound suppressor for this and all applicable subparagraphs.

18.26.17.1. The MXG/CC can waive the 7 level requirements and approve highly qualified 5-levels to be certified.

18.27.3. (Added) The MXG/CC and OG/CC shall appoint respective Mode 4 managers.

18.27.3.1. (Added) The MXG Mode 4 manager shall:

18.27.3.1.1. (Added) Establish a program to ensure accomplishment of Mode 4 testing in coordination with the OG Mode 4 manager.

18.27.3.1.2. (Added) Ensure testing and documenting procedures are followed. Local record-keeping procedures must be auditable and reportable when required.

18.27.3.1.3. (Added) Ensure procedures are in place to notify aircrew members of check results are developed.

18.27.3.2. (Added) The OG Mode 4 manager shall:

18.27.3.2.1. (Added) Establish a program to ensure accomplishment of Mode 4 testing in coordination with the MXG Mode 4 manager.

18.27.3.2.2. (Added) Ensure procedures are in place to verify Mode 4 system operability.

18.27.4. (Added) May be combined with the RWR systems program at the MXG/CC's option.

18.28. Abbreviated AFMC-approved -6 TO quick turn work cards may be used.

18.28.3. Specific requirements for 2AXXX and 2WXXX training and qualification, and CSS training and certification are identified in Paragraph 18.28.8.

18.28.8.5. N/A to the ANG. The following only applies to the ANG: Units may upload and download external fuel tanks during each exercise. However, the MXG/CC shall ensure personnel are proficient at uploading and downloading external fuel tanks.

18.28.9.1. To optimize munitions support, the number of aircraft munitions configurations must be minimized and standardized as much as possible. Munitions must be pre-assembled to the greatest extent possible. Configuration changes may be performed during training/exercises providing the applicable functional checks are performed to ensure the safety and reliability of the weapons system.

18.28.10. Munitions support functions shall be managed to support surge efforts IAW AFI 21-201. At the appropriate alert warning, predetermined loads must be assembled, preloaded as applicable, and delivered to a holding area. The munitions controlling agency, through the Munitions Liaison Officer SNCO, shall monitor the projected need for all-up-round munitions.

18.28.12. Ammunition in F-16 and F-15 aircraft shall be loaded as required, A-10 aircraft shall be loaded when 50 percent expenditures are reached unless mission requirements dictate reloading (this may be simulated by hooking up all required items and taking the standard loading time).

18.28.12.1. (Added) Actual expenditures must be tracked using AF IMT 2434 or a locally developed form. The Operations Group shall develop a system to track and report all simulated expenditures i.e., missile shots, bomb drops (by type), chaff/flare dispensed for each sortie flown. At the end of the flying day the form must be forwarded to the Munitions Element for reporting.

18.28.13. (Added) Training and Documentation Requirements.

18.28.13.1. (Added) The maintenance supervisor shall establish a coordinated training plan that includes aircraft maintenance personnel, weapons load crews, and fuel specialists.

18.28.13.2. (Added) Aircraft maintenance personnel must receive training on SGO concepts and the squadron's plan. Knowledge of the plan is the primary means of preventing mishaps. Supervisors must receive training on the plan, their part in it, and hazard/safety considerations.

18.28.13.3. (Added) APG trainers shall be responsible for the training and documentation of all 2AXXX aircraft maintenance personnel.

18.28.13.4. (Added) WSS shall be responsible for the training and documentation of all assigned weapons load crews IAW Chapter 16.

18.28.13.5. (Added) Supervisors must ensure training is documented in MIS.

18.30.2.3.1. (Added) Weatherproof storage for equipment, tools and other supplies to ensure equipment serviceability and accessibility.

18.30.3.14. (Added) TO 00-105E-9.

18.30.5.6. To include storage shortfalls.

18.30.7.2. All recovery team members should participate in an actual aircraft lift once every three years.

18.33. (Added) **KC-135 Single Integrated Operations Plans (SIOP).** If KC-135 units have a requirement for SIOP duties, they shall establish a written plan or OI outlining as a minimum:

18.33.1. (Added) Crew Chief qualifications.

18.33.2. (Added) Minimum "alert bag" contents.

18.34. (Added) **Scanning Electron Microscope/Energy Dispersive X-Ray (SEM/EDX) Magnetic Chip Detector Analysis Program (MCDP).**

18.34.1. (Added) General. This section establishes procedures for management of the Aircraft Engine Magnetic Chip Detector Analysis Program for all assigned F110-GE-100/-129 engines.

18.34.1.1. (Added) The Propulsion (primary) and Nondestructive Inspection (alternate) Supervisors shall be the point of contacts for SEM/EDX related matters.

18.34.1.2. (Added) All organizations requiring recurring chip detector analysis service shall identify by letter primary and alternate MCDP monitors for their unit. The letter must be updated when personnel change.

18.34.1.3. (Added) All newly assigned MCDP monitors must attend a briefing by the Propulsion Shop. This briefing shall cover the duties and responsibilities of all MCDP monitors.

18.34.1.4. (Added) All MCDP Monitors or their representatives shall ensure the following:

18.34.1.4.1. (Added) Magnetic Chip Detectors (MCD) are submitted for debris analysis for their aircraft and assigned engines as per applicable technical order.

18.34.1.4.2. (Added) Ensure MCD debris analysis is forwarded with the following information: squadron, rank/name, aircraft serial number, engine serial number, total engine hours, date/time, visual chips, and reason for analysis request and sortie number.

18.34.2. (Added) The Propulsion Shop shall:

18.34.2.1. (Added) MCD analyses that indicate significant levels of M50 or other critical materials shall be immediately reported to the MOC. MOC shall in-turn contact the owning squadron to arrange for immediate return of affected aircraft to home station.

18.34.2.2. (Added) Immediately notify test cell personnel of analysis results for engines in test cell.

18.34.2.3. (Added) Notify the MOC during periods of SEM/EDX downtime.

18.34.3. (Added) AMXS Supervision shall:

18.34.3.1. (Added) Be responsible for monitoring the MCDP on the flightline.

18.34.3.2. (Added) Ensure visual inspection of the MCD is performed IAW applicable technical orders.

18.34.3.3. (Added) Ensure that one clean MCD is available for each detector submitted for analysis.

18.34.3.4. (Added) Ensure MCDs are submitted for analysis within 75 minutes after engine shutdown.

18.34.3.5. (Added) Ensure current SEM/EDX status code is maintained for each aircraft serial number to indicate aircraft status relative to MCD analysis results. The following shall be used:

Level 0. Fully MC - No chips detected.

Level 1. Fully MC - Chips detected but within limits.

Level 2. Warning - Material amounts exceeded.

18.34.3.6. (Added) Coordinate with MOC to recall aircraft determined to be flying with unacceptable levels of debris.

18.34.4. (Added) The MOC shall:

18.34.4.1. (Added) Serve as primary communication link for transfer of SEM/EDX information between the Propulsion Shop and its customers.

18.34.4.2. (Added) Ensure current SEM/EDX status code is maintained for each aircraft serial number to indicate aircraft status relative to MCD analysis results.

18.34.4.3. (Added) Immediately notify the owning AMXS/Flying Squadron (transient aircraft) when MCD analysis indicates unacceptable levels of debris so they can coordinate recall of affected aircraft.

18.34.5. (Added) Cross Country/Deployed MCDP Analysis Requirements.

18.34.5.1. (Added) NDI must be notified prior to deployments to determine if MCDP support will be available at the deployed location.

18.34.5.2. (Added) If it is determined that MCDP is not available, visual MCD inspections must be performed IAW applicable engine directives.

18.35. (Added) **Combat Readiness Training Centers (CRTCs).** Training Centers have ground support equipment and maintenance shop facilities IAW AFMAN 91-201; Paragraph 6.12.1. Ensure applicable site plans and maps are maintained within the flight to be used by deployed forces. These forces need the use of CRTC bases and gunnery ranges for short term exercises and annual deployments. CRTC personnel maintain the support equipment and facilities and do not have aircraft or maintenance personnel for direct support of the deployed unit. Deployed units operate under their own management procedures.

18.35.1. (Added) The CRTC has shops and equipment needed to support limited maintenance. Once issued to the deployed unit, the maintenance of the support equipment and operation of the shops is the responsibility of the deployed unit. However, the responsibility for the assigned equipment remains with the CRTC.

18.35.2. (Added) The CRTC is organized as a consolidated maintenance function. Due to its small size, several management functions may be assigned to one individual. CRTC personnel shall not be integrated into the organization of deployed units. The CRTC remains a separate and independent function.

18.35.3. (Added) The Maintenance Superintendent and/or Chief Enlisted Manager (CEM) for the CRTC shall establish management procedures following the guidelines of this publication. The Maintenance Superintendent/Enlisted Manager shall:

18.35.3.1. (Added) Publish necessary OIs/supplements.

18.35.3.2. (Added) Publish a directive with responsibilities and requirements for the CRTC and deployed units.

18.35.3.3. (Added) Ensures deployed unit maintenance supervisors are briefed as a minimum on their responsibilities for the use of the facilities, safety, equipment and their relationship to the CRTC.

18.35.3.4. (Added) Ensure deployed units use their own supply support to the maximum extent possible.

18.35.3.5. (Added) Ensure assigned support equipment and facilities are maintained.

18.35.3.6. (Added) Ensure supply discipline by assigned personnel.

18.35.3.7. (Added) Ensures compliance with FOD program.

18.35.3.8. (Added) Oversees the CRTC maintenance safety program.

18.35.3.9. (Added) Establish a quality assessment program.

18.35.4. (Added) Quality Assurance Overview: The primary role of the CRTC QA is to identify areas of concern by determining the maintainability of aircraft, equipment condition, and personnel proficiency and training through the process of inspections and evaluations. It is understood that quality must be built into any system or operating methodology up front. CRTC shall use the ANG QuAD for documenting QA evaluations.

18.35.5. (Added) Maintenance Standardization Evaluation Program (MSEP): The MSEP emphasizes compliance-oriented maintenance. The purpose of the MSEP is to measure how well units meet or exceed standards. ANG CRTC MSEP focus areas are:

18.35.5.1. (Added) Compliance and Currency of Technical Orders and Directives.

18.35.5.2. (Added) Aircraft and Equipment Forms Documentation.

18.35.5.3. (Added) Aircraft and Equipment Inspection.

18.35.5.4. (Added) Compliance and Management of Safety, Environmental, and Housekeeping Programs.

18.35.5.5. (Added) Adequacy, Currency, and Validity of Training.

18.35.5.6. (Added) Personnel Proficiency. **NOTE**: QA shall make recommendations for increasing maintenance effectiveness and is available for involvement in process improvement. QA offers on-the-spot assistance and in-depth investigations to find appropriate corrective action to identified problem areas.

18.35.6. (Added) Quality Assurance training for CRTCs: In an effort to enhance continuity and communication within the QA program the dedicated instructor course shall be utilized to the maximum extent possible. Due to manning situations, the Director of Logistics (LG) and Director of Operations (OG) of the CRTC shall appoint a Chief Inspector as an additional duty and attendance to the formal QA inspector training course is recommended. Since the functional areas are not manned to support a full-time position in QA, selected qualified technicians may be assigned as augmentees. Document augmentee training on AF IMT 797 or MIS.

18.35.6.1. (Added) Evaluator Proficiency Evaluation (EPE). An over the shoulder evaluation of a QA inspector while performing a personnel evaluation and technical inspection. An EPE is required for initial qualification of QA inspectors and augmentees. Augmentees shall require annual re-certification.

18.35.7. (Added) Quality Assurance Routine Inspection List (RIL): The number of inspections are forecasted but, due to manning or unit mission demand during the specified time period, it may not be possible for QA to accomplish 100 percent of the targeted tasks. The list, as contained in **Table 18.3. (Added)**, CRTC Routine Inspection List (RIL), shall contain but is not limited to the following:

18.35.7.1. (Added) Aircraft and equipment forms/MIS documentation.

18.35.7.2. (Added) Aircraft ground handling and servicing tasks.

18.35.7.3. (Added) Technical data use and currency.

18.35.7.4. (Added) CTK management.

18.35.7.5. (Added) Housekeeping/Safety.

18.35.7.6. (Added) Vehicles (including AF IMT 244 and 1800).

18.35.7.7. (Added) Environmental Compliance.

18.35.7.8. (Added) AGE maintenance.

18.35.7.9. (Added) Munitions Material, Support and test equipment.

18.35.7.10. (Added) Munitions Inspections.

18.35.7.11. (Added) Munitions Storage Practices and Safety.

18.35.7.12. (Added) Munitions Accountability.

18.35.7.13. (Added) Munitions Stockpile.

18.35.7.14. (Added) Munitions Control 2000 (MC2K).

Table 18.3. (Added) CRTC Routine Inspection List (RIL).

MAINTENANCE	AQL	TYPE	REQUIREMENT
Aircraft and Equipment forms	3	SI	Two per quarter
Aircraft ground handling and servicing tasks	3	SI	Two semi-annually
Technical data use and currency	2	SI	One per quarter
CTK management	4	SI	Six annually
AGE flight line use	3	QVI	One per quarter
Housekeeping	4	SI	One per quarter
Vehicles (including AF IMT 1800 and 1806)	2	SI	One per quarter
Aircraft launch/recovery procedures	2	QVI	Two semi-annually
EOR procedures	2	QVI	Two semi-annually
Shop support equipment (including AF IMT 244)	2	SI	Two annually
Foreign Object Damage (FOD)	2	SI	One per quarter
AGE Maintenance Powered (Periodic)	2	SI	One per quarter
AGE Maintenance Powered (Annual/Special)	2	SI	One per quarter
AGE Maintenance Non-Power (Periodic)	2	SI	One per quarter
AGE Maintenance Non-Power (Annual/Spec)	2	SI	One per quarter
MUNITIONS			
Munitions Accountability	2	SI	One per quarter
Storage Practices and Safety	2	SI	Semi-annually
Material, Support and Test Equipment	2	QVI	Semi-annually
Munitions Stockpile Management	3	SI	One per quarter
Munitions Control 2000 (MC2K)	2	SI	One per quarter
Munitions Inspections	2	QVI	Semi-annually
Housekeeping Practices	2	SI	One per quarter
Vehicles	2	SI	One per quarter
CTK management	3	SI	One per quarter

NOTE: Items that are semi-annually are due to Alpena/Volk Field CRTC seasonal traffic. TEC codes shall be provided by the ANG QuAD.

18.35.8. (Added) Quality Assurance Program Quarterly Summary: Provides information for senior level management. Data profile for the Quarterly Summary is a compilation of the Quality control reports for the quarter.

18.35.9. (Added) Technical Order Distribution Office (TODO): TO 00-5-1 explains the procedures of ATOMS and Joint Computer Aided Acquisition and Logistic Support (JCALS), including filing, distributing, posting, ordering, establishing Local Checklists, Work cards, and Job Guides. The TODO/JCALS

Administrator is the unit point of contact for Technical Orders, inspects the TODAs in the maintenance complex at least annually, and performs spot checks of TO files.

18.35.10. (Added) Discrepancy Categories (Refer to Chapter 10).

18.35.11. (Added) MSEP Grading. Units must grade their MSET evaluations IAW Paragraph 10.10.2.4. Inspectors/assessors rate each inspection based on whether the end product meets the established AQL. The AQL is the maximum number of minor discrepancies allowed in order to meet an established quality level.

18.35.12. (Added) Inspection Routing.

18.35.12.1. (Added) Routing Passed Inspections: All inspections rated pass are routed to all offices as needed and shall require no response unless directed locally. Maintenance Superintendent/CEM shall maintain access to the ANG QuAD database for reports reviews and analysis.

18.35.12.2. (Added) Routing Failed Inspections: All failed evaluations/inspections require a response from the section supervisor within five workdays from the receipt of the notice via e-mail. The Maintenance Superintendent/CEM forwards the report to the applicable Group commander or designated representative. Suspense for subsequent reviewing is three working days.

18.35.13. (Added) Personnel Evaluations (PE): A PE is an over-the-shoulder evaluation of a maintenance action or inspection by an individual or team. The purpose of the PE is to evaluate technician/supervisor job proficiency, degree of training, and compliance with technical data. Individuals performing, supervising, or evaluating maintenance tasks are subject to a PE. QA Inspectors shall brief individuals on results of the evaluation prior to leaving. Evaluations do not replace supervisor/manager responsibility of ensuring a well-trained, technically proficient work force.

18.35.13.1. (Added) Individual Evaluation: A QA over-the-shoulder evaluation of a maintenance technician or supervisor while actually performing a task. The evaluator may start or stop the task evaluation at any step. PEs may be performed on individuals working alone or while working as part of a team. Evaluations must accurately assess the proficiency of each individual under evaluation. Team Evaluation: A QA over-the-shoulder evaluation of maintenance supervisors and technicians completing a team task. A team task is one requiring more than one person (according to approved technical data) to complete the task. For example, refueling, towing, etc.

18.35.14. (Added) Rating Personnel Evaluations: QA rates each evaluation based on AQLs/standards. A failed PE rating means the specific task was not performed within established AQL/standards. The rating applies only to the specified task evaluated and not to other tasks that a technician or supervisor is qualified to perform. Upon completion of a failed evaluation, the evaluator must provide on-the-spot feedback or training.

18.35.14.1. (Added) Major Discrepancies: (Listed below are examples but not limited to.)

18.35.14.1.1. (Added) Technician fails to detect a major discrepancy while complying with an inspection or work card requirement.

18.35.14.1.2. (Added) Technician fails to comply with a step of prescribed technical data that could affect the performance of the equipment involved or cause injury to personnel.

18.35.14.1.3. (Added) Technician demonstrates a lack of technical proficiency or system knowledge, or training is not documented.

18.35.14.1.4. (Added) Technician commits a safety violation.

18.35.14.1.5. (Added) Technician fails to document maintenance actions in appropriate equipment records.

18.35.14.2. (Added) Minor Discrepancies: (Listed below are examples but not limited to.)

18.35.14.2.1. (Added) Documentation errors.

18.35.14.2.2. (Added) Deviation from tech data without advising evaluator.

18.35.15. (Added) Quality Verification Inspection (QVI): A QVI is an inspection of equipment conditions following a maintenance inspection or repair action and verifies that a technician or supervisor properly completed the inspection or repair action. The QVI report reflects deficiencies by the individual who accomplished the task and identifies specific discrepancies. Discrepancies are documented in active equipment records and forms (i.e., AFTO Forms 781A or AFTO Form 244).

18.35.16. (Added) Rating Quality Verification Inspections.

18.35.16.1. (Added) Major Discrepancies: Category I and II major discrepancies are findings that indicate the weapon system, support system, or support equipment are considered unsafe for flight or use. Weapons system or equipment is not flown or used until unsatisfactory discrepancy is corrected. A major discrepancy results in a failed inspection.

18.35.16.2. (Added) Minor Discrepancies: Unsatisfactory condition that does not warrant aircraft grounding or discontinuing use of equipment. Refer to the TEC and AQL/Standards for the total number of minor points allowed to determine a pass rating.

18.35.17. (Added) Special Inspections (SI): SIs are inspections not covered by Quality Verification Personnel, and Management Inspections. SIs may include, but are not limited to, aircraft and equipment forms inspections, CTK, TO files, vehicle inspections, housekeeping, safety practices, FOD program, etc. These inspections may be condition or procedural compliance oriented. Known and suspected problem areas must be targeted by the use of SIs. Other areas shall continue to be inspected on a sampling basis.

18.35.17.1. (Added) Rating Special Inspections: SIs must be rated pass or fail based on established AQL/standard. SIs can be non-rated (i.e., courtesy inspection of jacket file, etc.).

18.35.18. (Added) Transient Alert.

18.35.18.1. (Added) Major Discrepancies: (Listed below are examples but not limited to.)

18.35.18.1.1. (Added) Erasure of a symbol.

18.35.18.1.2. (Added) Red X discrepancies not entered or cleared.

18.35.18.1.3. (Added) Tool inventory not completed.

18.35.18.1.4. (Added) Exceptional Release entry not cleared prior to flight.

18.35.18.2. (Added) Minor Discrepancies: (Listed below are examples but not limited to.)

18.35.18.2.1. (Added) Signature, employee number, rank/grade improperly entered.

18.35.18.2.2. (Added) Vehicle 1800 not signed and or vehicle dirty.

18.35.18.2.3. (Added) FOD check not performed before aircraft arrival.

18.35.19. (Added) Aerospace Ground Equipment: Equipment is inspected for obvious defects, irregularities affecting operation, and AFTO Form 244, *Industrial/Support Equipment Record*, documentation. Emphasis is placed on serviceability of equipment.

18.35.19.1. (Added) Major Discrepancies: (Listed below are examples but not limited to.)

18.35.19.1.1. (Added) AFTO Form 244 missing.

18.35.19.1.2. (Added) Discrepancies noted rendering equipment unserviceable (RED X).

18.35.19.1.3. (Added) Notable flammable fluid leak.

18.35.19.1.4. (Added) Power-on check failure (after Periodic Inspection).

18.35.19.1.5. (Added) Work cards not on hand if applicable.

18.35.19.1.6. (Added) Lanyard broken or missing.

18.35.19.1.7. (Added) Supervisor review of forms not complied with per TO 00 series.

18.35.19.1.8. (Added) Inspection due but not entered on AFTO Form 244.

18.35.19.2. (Added) Minor Discrepancies: (Listed below are examples but not limited to.)

18.35.19.2.1. (Added) Cleanliness.

18.35.19.2.2. (Added) Documentation errors in AFTO Form 244.

18.35.19.2.3. (Added) Fluid levels/lube not IAW Technical Data.

18.35.19.2.4. (Added) Markings not IAW Technical Data.

18.35.19.2.5. (Added) Minor corrosion/cracks.

18.35.19.2.6. (Added) Required reflective tape and/or bumper padding missing.

18.35.19.2.7. (Added) Identification markings ambiguous.

18.35.20. (Added) Bench Stock:

18.35.20.1. (Added) Major Discrepancies: (Listed below are examples but not limited to.)

18.35.20.1.1. (Added) Label missing.

18.35.20.1.2. (Added) Shadow board not properly maintained (if used).

18.35.20.1.3. (Added) Pilferable items not safeguarded.

18.35.20.1.4. (Added) Precious metal recoverable container not secured.

18.35.20.1.5. (Added) Deleted items still in original bin.

18.35.20.2. (Added) Minor Discrepancies: (Listed below are examples but not limited to.)

18.35.20.2.1. (Added) Co-mingled bench stock.

18.35.20.2.2. (Added) Indicators missing if applicable (shelf life, precious metals, etc.).

18.35.20.2.3. (Added) Out dated S04, Master Inventory.

18.35.20.2.4. (Added) Shop Stock not properly sub-located.

18.35.20.2.5. (Added) Sub-located items not referencing original bins.

18.35.21. (Added) Composite Tool Kit (CTK)/Special Tools: Inspections are performed IAW Chapter 13.

18.35.21.1. (Added) Major Discrepancies: (Listed below are examples but not limited to.)

18.35.21.1.1. (Added) Annual inventory not accomplished.

18.35.21.1.2. (Added) Unserviceable tools.

18.35.21.1.3. (Added) CTK Inventory does not match contents of toolbox.

18.35.21.1.4. (Added) CTK sign-in/sign-out not accomplished.

18.35.21.1.5. (Added) Overdue inspection of tools requiring calibration/inspection.

18.35.21.1.6. (Added) Tool not shadowed or no longer in use.

18.35.21.1.7. (Added) Tools improperly etched (illegibly marked, no etching, double etched, does not match box).

18.35.21.1.8. (Added) Tool missing and not documented.

18.35.21.1.9. (Added) Torque wrench not set at lowest setting when stored.

18.35.21.1.10. (Added) Count of all dispatchable CTKs and equipment not performed at beginning and end of each shift.

18.35.21.1.11. (Added) Foreign object found in CTK.

18.35.21.2. (Added) Minor Discrepancies: (Listed below are examples but not limited to.)

18.35.21.2.1. (Added) Damaged but serviceable.

18.35.21.2.2. (Added) Foam padding or shadow deteriorated to the point affecting the shadow of the tool.

18.35.21.2.3. (Added) Minor corrosion.

18.35.21.2.4. (Added) Minor CTK Inventory documentation errors

18.35.22. (Added) Foreign Object Inspections: Inspections are performed on parking ramps along the flight line, hangars, work areas, facilities, aircraft, and equipment.

18.35.22.1. (Added) Major Discrepancies: (Listed below are examples but not limited to.)

18.35.22.1.1. (Added) Failure to comply with FOD prevention directives.

18.35.22.1.2. (Added) Failure to empty F.O. containers on a daily basis.

18.35.22.1.3. (Added) Failure to install protective covers on ducts, tubes, hoses, leads, intakes, etc., to prevent FOD.

18.35.22.1.4. (Added) Failure to wear proper attire when entering an engine intake.

18.35.23. (Added) Housekeeping: Inspections are accomplished IAW AFOSH 91-100. This inspection shall evaluate the cleanliness/safety of offices and work areas. Housekeeping during and following maintenance is considered. **NOTE**: For Munitions Storage Areas; In addition to the above mentioned areas, there must be inspections performed IAW AFMAN 91-201.

18.35.23.1. (Added) Major Discrepancies: (Listed below are examples but not limited to.):

18.35.23.1.1. (Added) Any obstacles in passageway compromising safety and travel.

18.35.23.1.2. (Added) Fire extinguisher inspection overdue, under serviced, or unserviceable.

18.35.23.1.3. (Added) Fire hazard or improperly stowed flammable material.

18.35.23.1.4. (Added) Self-closing lids not used for combustible waste, rags, etc.

18.35.23.1.5. (Added) Spills left on floor causing a potential safety hazard.

18.35.23.1.6. (Added) Electrical cords and compressed air lines not stowed.

18.35.23.2. (Added) Minor Discrepancies: (Listed below are examples but not limited to.)

18.35.23.2.1. (Added) Garbage containers not emptied on a routine basis.

18.35.23.2.2. Trash and buildup of dirt on office or work area floors.

18.35.24. (Added) Shop Support Equipment/Test Equipment: Inspections are performed IAW guidelines in applicable Technical Data and service manuals to determine serviceability.

18.35.24.1. (Added) Major Discrepancies: (Listed below are examples but not limited to.)

18.35.24.1.1. (Added) Overdue inspections.

18.35.24.1.2. (Added) Calibrated Inspection overdue.

18.35.24.1.3. (Added) Missing AFTO Forms 244/245.

18.35.24.1.4. (Added) Bare power cords or wiring on equipment.

18.35.24.1.5. (Added) Defect affecting serviceability.

18.35.24.1.6. (Added) Equipment parts missing.

18.35.24.1.7. (Added) Connector Pins corroded/bent/recessed/broke.

18.35.24.1.8. (Added) Hoses left uncapped.

18.35.24.1.9. (Added) Missing guards on flywheels, pulleys, etc.

18.35.24.1.10. (Added) Overrated fuses installed in equipment.

18.35.24.1.11. (Added) Leaks.

18.35.24.2. (Added) Minor Discrepancies: (Listed below are examples but not limited to.)

18.35.24.2.1. (Added) Minor corrosion.

18.35.24.2.2. (Added) Minor cracks.

18.35.24.2.3. (Added) Cleanliness.

18.35.24.2.4. (Added) Documentation errors in AFTO Forms 244/245.

18.35.24.2.5. (Added) Documentation errors on PMEL Tags resulting in identification errors.

18.35.25. (Added) Technical Order File: Inspections of Technical Order Files are accomplished by the TODO. QA shall perform spot inspections on the Technical Orders.

18.35.25.1. (Added) Major Discrepancies: (Listed below are examples but not limited to.)

18.35.25.1.1. (Added) Changes, Supplements, Technical Order Page Supplements (TOPS), etc., not filed within 5 working days or within five days of aircraft return to home station.

18.35.25.1.2. (Added) Deleted pages not removed from tech data.

18.35.25.1.3. (Added) List of Effective Pages (LEP) overdue/not accomplished.

18.35.25.1.4. (Added) Missing pages in Technical Data.

18.35.25.1.5. (Added) Incorrectly filing Supplements, TOPS, changes, etc.

18.35.25.1.6. (Added) Supplements not annotated against the affected paragraph.

18.35.25.1.7. (Added) TOs missing from files (unaccounted for).

18.35.25.2. (Added) Minor Discrepancies: (Listed below are examples but not limited to.)

18.35.25.2.1. (Added) Technical Order Binder Labels improperly completed.

18.35.25.2.2. (Added) Requisition follow-up overdue.

18.35.25.2.3. (Added) Title page not properly annotated.

18.35.25.2.4. (Added) Unserviceable TO binder.

18.35.26. (Added) Vehicle: Inspections are accomplished IAW AFI 24-301 VOL I, AFI 24-302, and the applicable vehicle inspection card. The inspection shall evaluate the overall condition of each assigned vehicle to determine operational capability.

18.35.26.1. (Added) Major Discrepancies: (Listed below are examples but not limited to.)

18.35.26.1.1. (Added) Battery level low (core exposed).

18.35.26.1.2. (Added) Daily inspection not accomplished.

18.35.26.1.3. (Added) Fire bottle unserviceable.

18.35.26.1.4. (Added) Hazardous material left in vehicle.

18.35.26.1.5. (Added) Major fluid leak.

18.35.26.1.6. (Added) Gear belts missing or inoperative.

18.35.26.1.7. (Added) Tire worn below wear marks/flat.

18.35.26.1.8. (Added) Undocumented damage rendering the vehicle unserviceable.

18.35.26.1.9. (Added) Any inoperative light listed in checklist under Major.

18.35.26.1.10. (Added) Low fluid level.

18.35.26.2. (Added) Minor Discrepancies: (Listed below are examples but not limited to.)

18.35.26.2.1. (Added) Battery terminal clamps loose or corroded.

18.35.26.2.2. (Added) Loose/worn belts.

18.35.26.2.3. (Added) Low tire pressure not within plus or minus 10 PSI.

18.35.26.2.4. (Added) Any lights inoperative not listed under Major.

18.35.26.2.5. (Added) Windshield wiper worn.

18.35.26.2.6. (Added) Minor undocumented fuel/oil/coolant leaks.

18.35.27. (Added) Munitions Accountability: Inspections are accomplished IAW AFI 21-201 and Quality Control Table 16.1. This inspection shall evaluate the overall inventory/ accountability processes and supporting documentation.

18.35.27.1. (Added) Major Discrepancies: (Listed below are examples but not limited to.)

18.35.27.2. (Added) Stock balance discrepancies.

18.35.27.3. (Added) Not accomplished or incomplete inventories.

18.35.27.4. (Added) Supporting documentation and or required signatures/information missing.

18.35.27.5. (Added) Missing or outdated documents of authorization.

18.35.27.6. (Added) MASO not appointed by proper authority.

18.35.27.2. (Added) Minor Discrepancies: (Listed below are examples but not limited to.)

18.35.27.2.1. (Added) Missing required stamp(s).

18.35.27.2.2. (Added) Missing transaction number.

18.35.27.2.3. (Added) Document filed in wrong sequence.

18.35.28. (Added) Munitions Storage Practices and Safety: Inspections are accomplished IAW AFMAN 91-201 and AF 21-201. This inspection shall evaluate the overall storage practices/movement processes and safety.

18.35.28.1. (Added) Major Discrepancies: (Listed below are examples but not limited to.)

18.35.28.1.1. (Added) Improper storage of hazard classes/groups (compatibility).

18.35.28.1.2. (Added) Exceeding NEW for storage location.

18.35.28.1.3. (Added) Improper packaging.

18.35.28.1.4. (Added) Wrong condition code marked on item.

18.35.28.1.5. (Added) Unserviceable assets not segregated from serviceable.

18.35.28.1.6. (Added) Custody account assets not identified properly.

18.35.28.1.7. (Added) Custody account assets not segregated/stored properly.

18.35.28.1.8. (Added) Assets not stored with more than normal lot-to-lot separation.

18.35.28.2. (Added) Minor Discrepancies: (Listed below are examples but not limited to.)

18.35.28.2.1. (Added) Improper use of dunnage.

18.35.28.2.2. (Added) Missing/or improperly annotated location markers.

18.35.28.2.3. (Added) Missing seal.

18.35.28.2.4. (Added) Improper container markings or missing information i.e., NSN, DODIC, Qty, etc.

18.35.28.2.5. (Added) Movement control procedures not properly adhered to or documented using AF IMT 4147, *Munitions Movement Control Worksheet*.

18.35.28.2.6. (Added) AF IMT 4147, blocks are missing information and not quality checked by Storage.

18.35.28.2.7. (Added) Crew briefings not accomplished prior to explosive operation.

18.35.29. (Added) Munitions Material, Support and Test Equipment: Inspections are accomplished IAW Item TO.

18.35.29.1. (Added) Major Discrepancies: (Listed below are examples but not limited to.):

18.35.29.1.1. (Added) Overdue inspections.

18.35.29.1.2. (Added) Missing AFTO Forms 244/245.

18.35.29.1.3. (Added) Bare power cords or wiring on equipment.

18.35.29.1.4. (Added) Defect affecting serviceability.

18.35.29.1.5. (Added) Equipment parts missing.

18.35.29.1.6. (Added) Connector Pins corroded/bent/recessed/broke.

18.35.29.1.7. (Added) Hoses left uncapped.

18.35.29.1.8. (Added) Missing guards on flywheels, pulleys, etc.

18.35.29.1.9. (Added) Overrated fuses installed in equipment.

18.35.29.1.10. (Added) Overdue calibration inspection.

18.35.29.2. (Added) Minor Discrepancies: (Listed below are examples but not limited to.)

18.35.29.2.1. (Added) Minor corrosion.

18.35.29.2.2. (Added) Minor cracks.

18.35.29.2.3. (Added) Cleanliness.

18.35.29.2.4. (Added) Documentation errors in AFTO Forms 244/245.

18.35.29.2.5. (Added) Leaks.

18.35.30. (Added) Munitions Stockpile: Inspections are accomplished IAW Item TO and AFI 21-201.

18.35.30.1. (Added) Major Discrepancies: (Listed below are examples but not limited to.)

18.35.30.1.1. (Added) Allocations not properly forecasted.

18.35.30.1.2. (Added) Assets issued without allocation.

18.35.30.1.3. (Added) Missing courtesy storage agreement.

18.35.30.1.4. (Added) Failure to notify customer/custodians of restricted/suspended issued assets.

18.35.30.2. (Added) Minor Discrepancies: (Listed below are examples but not limited to.)

18.35.30.2.1. (Added) Failure to report/identify excess assets to ANG.

18.35.30.2.2. (Added) Not receiving assets on accountable records within five workdays.

18.35.30.2.3. (Added) Did not update shipment in-transit information in CAS.

18.35.31. (Added) Munitions Control 2000 (MC2K): Inspection is IAW this publication and AFI 21-201. Work order program, equipment records, facility records, and fire symbol/hazard class division information.

18.35.31.1. (Added) Major Discrepancies: (Listed below are examples but not limited to.)

18.35.31.1.1. (Added) Work orders not being input/reviewed and updated.

18.35.31.1.2. (Added) Equipment form information not being updated (AFTO Form 244).

18.35.31.1.3. (Added) Equipment information loaded in error, i.e., serial number, model etc.

18.35.31.1.4. (Added) Fire symbol log not updated.

18.35.31.1.5. (Added) Explosive limits loaded in error.

18.35.31.2. (Added) Minor Discrepancies: (Listed below are examples but not limited to.)

18.35.31.2.1. (Added) Work orders missing information.

18.35.31.2.2. (Added) AWM/AWP information missing or incomplete, i.e., supply document number, etc.

18.35.32. (Added) Munitions Inspection: Inspection is IAW Item TO and AFI 21-201. Inspection processes that ensure a qualified appointed munitions inspector and a program that dictates proper tagging, marking, packing and serviceability of munitions assets.

18.35.32.1. (Added) Major Discrepancies: (Listed below are examples but not limited to.)

18.35.32.1.1. (Added) Inspections not being accomplished as required (PI, SI, SII, SMI, etc.).

18.35.32.1.2. (Added) Senior Munitions Inspector not properly appointed.

18.35.32.1.3. (Added) Munitions Inspectors not properly trained/re-certified.

18.35.32.1.4. (Added) Missing authorization letters for appointment of residue/Demil certified inspectors.

18.35.32.1.5. (Added) Shelf/Service Life not being monitored.

18.35.32.2. (Added) Minor Discrepancies: (Listed below are examples but not limited to.)

18.35.32.2.1. (Added) General Inspection Procedures not adhered to.

18.35.32.2.2. (Added) AF IMT 102’s not filled out properly.

18.35.32.2.3. (Added) 12 months of AF IMT 102’s not on file.

18.35.32.2.4. (Added) Lot history info not updated.

18.35.33. (Added) Management Inspection (MI): MIs cover a broad category. This inspection is used to follow up on trends, conduct investigations, or conduct research to identify the root of problems. Inspections are performed when directed/requested by the Group Commander, QA or work center supervisors. MIs may encompass PE/QVI trends and other inspection data, NMC causes, aborts and trends, in-flight emergency trends, high component or system failure rates, suspected training deficiencies, and tasks outlined in aircraft -6 technical orders. MI inspection results are reported to the requester. MIs can be non-rated and may be used to identify negative trends.

18.35.34. (Added) Safety and Technical Violations: Quality Assurance, upon observing conditions, must stop task and note infractions.

18.35.34.1. (Added) Detected Safety Violation (DSV): An unsafe act by an individual observed by the Quality Assurance. A DSV is not documented on an individual undergoing a personnel evaluation since the unsafe act automatically results in a fail rating on the PE.

18.35.34.2. (Added) Technical Data Violation (TDV): Maintenance performed without the use of technical data and observed by Quality Assurance. When an individual fails to utilize tech data during a PE, it is a failure of the evaluation and not addressed as a TDV.

18.35.34.3. (Added) Unsatisfactory Condition Report (UCR): An unsafe condition other than a DSV. The UCR is charged to the work center supervisor. Discrepancies are documented as a UCR when it is not possible to determine who created the condition.

18.36. (Added) **Transient Aircraft.** Provide maintenance for all transient aircraft as required.

18.36.1. (Added) The scope and depth of required technical data to support transient aircraft shall be determined by the MXG/CC. If technical data and qualified personnel are not available then the pilot or qualified air crew member must remain at the aircraft while basic servicing operations are performed. Under no circumstances shall maintenance be performed on transient aircraft without technical data and qualified personnel.

18.37. (Added) **Forward Operating Location (FOL), Fort Drum, New York.** The mission of this unit is to provide effective combat readiness training to all Northeast CAF units for all aspects of maintenance, support, and aircrew combat training pertaining to live ordinance training. Additionally the FOL produces sorties for Northeast CAF units without the need for the using unit to deploy their personnel. FOL personnel shall perform thruflight, launch, recovery, minor repair, and service of deployed aircraft, on/off equipment maintenance and support equipment maintenance within the capability of assigned personnel, equipment, and facilities. Personnel shall also be tasked to load specific munitions items once designated by Detachment Commander, (DETCO) and task certified. Cross utilization training is used exclusively by the detachment as prescribed by this instruction.

18.37.1. (Added) Maintenance Organization. Maintenance Management latitude is given to the Pro Super. Detachment manning based on assigned equipment, scheduled sorties, and available facilities at the detachment. Unit's schedule sorties through the Pro Super that are within the capabilities of assigned personnel. The Pro Super shall manage, schedule, plan, control, and direct the use of all maintenance resources and be responsible for the following:

18.37.1.1. (Added) Ensure a quality assessment program is developed.

18.37.1.2. (Added) Control the assignment and use of maintenance personnel. Ensure all work shifts are adequately manned.

18.37.1.3. (Added) Coordinate with the range facility on the monthly schedule of aircraft that shall utilize the FOL.

18.37.1.4. (Added) Control assignment and use of facilities and equipment at the detachment.

18.37.1.5. (Added) Administer the detachment Safety program.

18.37.1.6. (Added) Ensure supply management procedures are accomplished.

18.37.1.7. (Added) Monitor the detachment Load Crew Training program as follows:

18.37.1.7.1. (Added) Ensure the 174th WWM appoints the detachment weapons load crew by letter as an LSC.

18.37.1.7.2. (Added) Ensure the detachment LSC maintains certification as outlined in Chapter 16 of this instruction.

18.37.1.7.3. (Added) Ensure the detachment LSC is certified under a TTML jointly developed with the units it services.

18.37.1.8. (Added) Establish an Oil Analysis Program.

18.37.1.9. (Added) Establish a Maintenance Training Program.

18.37.1.10. (Added) Manage the detachment Financial Management program.

18.37.1.11. (Added) Monitor and coordinate requirements to support the maintenance mission and include the plans, programs, and host-tenant agreements.

18.37.1.12. (Added) Control the Hot Refueling program.

18.37.1.13. (Added) Provide liaison between the detachment, deploying unit MXG personnel, and Fort Drum, NY personnel. Provide support in nationally recognized Global Exercises with all flying units and support units that are deployed to Fort Drum, NY.

18.37.1.14. (Added) Develop and administer a FOD program for the detachment.

18.37.1.15. (Added) Ensure TMDE is calibrated IAW TO 00-20-14.

18.37.1.16. (Added) Work in conjunction with Detachment Commander to ensure maintenance activities are within the means of assigned personnel.

18.37.1.17. (Added) Ensure an effective CTK and Bench Stock System is utilized.

18.37.1.18. (Added) Assign vehicle control officers for assigned government vehicles at detachment.

18.37.1.19. (Added) Establish ADPE account for detachment. Ensure a LAN system is established with assigned unit for effective accountability of assigned equipment, CAS, and personnel and to ensure effective communications is established with host unit and Air National Guard Readiness Center (ANGRC).

18.37.1.20. (Added) Develop and publish necessary OIs.

18.37.1.21. (Added) Develop a program for accountability of all munitions and fuels that are utilized at the attachment. Units utilizing the FOL for live ordnance training must coordinate with detachment personnel for all flying activities.

18.37.2. (Added) The detachment commander shall authorize production inspectors.

18.38. (Added) **Alert Detachment.**

18.38.1. (Added) Detached Alert:

18.38.1.1. (Added) Maintenance Organization. Detachment manning is based on workload, aircraft type, and location of alert detachments. Each detachment maintenance organization shall have a CEM who shall ensure its efficient operation. Management latitude is given to the CEM in recognition of the factors affecting each alert detachment.

18.38.1.2. (Added) Detachment provides for immediate launch, recovery, repair, and service of alert aircraft; on/off support equipment maintenance within capability of assigned personnel, equipment, and facilities.

18.38.1.3. (Added) CEM manages detachment maintenance complex. CEM shall plan, schedule, control, and direct use of all maintenance resources and be responsible for the following:

18.38.1.3.1. (Added) Ensure a MSEP is established.

18.38.1.3.2. (Added) Control assignment and use of maintenance personnel. Ensure all shifts are adequately supervised.

18.38.1.3.3. (Added) Coordinate with detachment Operation activities in establishing maintenance requirements.

18.38.1.3.4. (Added) Ensure requirements to support mission are included in plans, programs, and host-tenant agreements.

18.38.1.3.5. (Added) Control assignment and use of maintenance facilities and equipment.

18.38.1.3.6. (Added) Administer safety program.

18.38.1.3.7. (Added) Administer FOD program.

18.38.1.3.8. (Added) Designate production inspectors.

18.38.1.3.9. (Added) Manage financial program.

18.38.1.3.10. (Added) Establish an OI.

18.38.1.3.11. (Added) Develop a munitions Employment/Re-supply Plan.

18.38.1.3.12. (Added) Establish a maintenance-training program and designate an alert training manager.

18.38.1.3.13. (Added) Ensure supply management procedures are accomplished.

18.38.1.3.14. (Added) Monitor the load crew/personnel certification/qualification program.

18.38.1.3.15. (Added) Establish an Oil Analysis Program for assigned equipment.

18.38.1.3.16. (Added) Establish a debriefing program.

18.38.1.3.17. (Added) Comply with calibration requirements established by either the host base or supporting unit.

18.38.1.3.18. (Added) Establish necessary security programs.

18.38.1.3.19. (Added) Liaison between detachment and parent unit.

18.38.1.3.20. (Added) Ensure detachment has required tools and equipment and are controlled IAW chapter 13 of this publication.

18.38.1.3.21. (Added) Ensure detachment has required support equipment.

18.38.1.4. (Added) The Alert section shall consist of selected personnel who have received training to perform preflight, postflight, servicing, launching, to include arm/dearm of missiles provided the following conditions are met:

18.38.1.4.1. (Added) Complete initial and annual weapons academics and weapons task qualification training using the applicable MDS 33-1-2 procedures and track training in the MIS or WLCMP.

18.38.1.5. (Added) Weapons Training Responsibilities and Load Crew Requirements:

18.38.1.5.1. (Added) Senior most qualified 2W171 at detachment shall be designated by WWM in writing as a member of the parent LSC and must be initially certified/evaluated as a load crew chief by the WWM or designated official.

18.38.1.5.2. (Added) Certification and training of 2W1X1 load crewmembers must be the same as home station standards.

18.38.1.5.3. (Added) Load crew training and certification must be documented and routed to parent unit LSC and returned to the detachment for filing.

18.38.1.5.4. (Added) Initial certification of other crewmembers may be accomplished by parent unit LSC/lead team member. Crewmembers may be used to load in other positions at discretion of load crew chief. Dual certification is authorized.

18.38.1.6. (Added) Other aircraft maintenance personnel may be certified as augmentee loaders IAW chapter 16.

18.38.1.7. (Added) Load crewmembers/load augmentees may accomplish captive missile inspections provided they are qualified to perform these inspections.

18.38.1.8. (Added) At least two assigned 2W1X1s shall be certified as load crew chiefs.

18.38.2. (Added) Home station Alert.

18.38.2.1. (Added) Maintenance Organization. Alert manning is based on workload, aircraft type, and location of alert areas. Each maintenance organization shall have an Alert Supervisor who shall ensure its efficient operation. Management latitude is given to the Alert Supervisor in recognition of the factors affecting the alert area.

18.38.2.2. (Added) Alert area provides for immediate launch, recovery, repair, and service of alert aircraft; on/off equipment and support equipment maintenance within the capability of assigned personnel, equipment, and facilities.

18.38.2.3. (Added) Alert Supervisor manages the alert maintenance complex. This shall be the sole responsibility of the Alert Supervisor. Alert Supervisor plans and schedules use of maintenance resources and is responsible for the following:

18.38.2.3.1. (Added) With coordination through the parent unit, Quality Assurance ensure alert is included and participates in MSEP.

18.38.2.3.2. (Added) Control assignment and use of maintenance personnel. Ensure all shifts are adequately supervised.

18.38.2.3.3. (Added) Ensure compliance with established wing safety program.

18.38.2.3.4. (Added) Ensure compliance with established wing FOD program.

18.38.2.3.5. (Added) Ensure requirements to support mission are included in parent unit plans and programs.

18.38.2.3.6. (Added) Establish OIs as required.

18.38.2.3.7. (Added) Develop a munitions Employment/Re-supply Plan.

18.38.2.3.8. (Added) Establish a maintenance training program and designate an alert training manager.

18.38.2.3.9. (Added) Ensure supply management procedures are accomplished.

18.38.2.3.10. (Added) Monitor the load crew/personnel certification/qualification program.

18.38.2.3.11. (Added) Ensure compliance with established wing Oil Analysis Program for assigned equipment.

18.38.2.3.12. (Added) Ensure compliance with established wing debriefing program.

18.38.2.3.13. (Added) Ensure compliance with established wing calibration requirements.

18.38.2.3.14. (Added) Ensure necessary security programs are implemented and followed.

18.38.2.3.15. (Added) Ensure required tools and equipment and are controlled IAW chapter 13 of this publication and applicable group OIs.

18.38.2.3.16. (Added) Ensure required support equipment is available.

18.38.2.4. (Added) The Alert section shall consist of selected personnel who have received training to perform preflight, postflight, servicing, launching, to include arm/dearm of missiles provided the following conditions are met:

18.38.2.4.1. (Added) Complete initial and annual weapons academics and weapons task qualification training using the applicable MDS 33-1-2 procedures and track training in the MIS or WLCMP.

18.39. (Added) **Torque Wrench Calibration Site.** Units listed in TO 00-20-14 and approved by the AFMETCAL Det 1 as a Limited User/Owner Torque Calibration/Repair Capability must ensure torque devices are calibrated per any applicable CMS or TO 33K-1-100-1/2.

18.39.1. (Added) Only approved Torque Calibration Standards or equivalent equipment meeting accuracy requirements as per calibration procedures shall be used to certify torque devices. Torque Calibration Standards must be calibrated by an AFMETCAL program PMEL.

18.39.2. (Added) Only torque devices owned by the organization shall be calibrated on this site. Torque devices beyond the capability of the organization to calibrate, shall be sent to the Unit's supporting PMEL and must be included as part of their PMEL TMDE inventory.

18.39.3. (Added) Ensure all personnel performing torque calibrations have been properly trained. At a minimum, an individual must have had training either by possessing a 2P0X1 AFSC, have attended Torque Wrench Calibration Course # E2RST2P031 002 or have successfully participated in an OJT program.

18.39.4. (Added) Maintain a Certification Roster of all qualified personnel performing torque calibrations.

18.39.5. (Added) Ensure there is a capability (Chart Recorder) to monitor and record the environment in the calibration area. The torque calibrator/standard must be maintained at a temperature of 73°F ± 9°F during the 24 hour period prior to the torque devices being calibrated. Torque devices have specific "soak' time requirements as per TO 33K procedures. The requirement for Relative Humidity (RH) between 15 and 70 percent applies only while the actual calibration procedure is being performed. Environmental charts shall be retained from the date of the last AFMETCAL on-site assessment.

18.39.6. (Added) Ensure a complete inventory of all torque devices calibrated at unit level is maintained current, and it is made available on request by AFMETCAL Det 1. This inventory should be kept in an automated format to facilitate scheduling and data collection.

18.39.7. (Added) The Torque Calibration Site supervisor must develop an internal QP specifically tailored to the torque calibration function. At a minimum, establish a process to randomly select three percent of the completed monthly calibrations (but not less than two certified torque devices per month) for a Quality Review (QR) and every six months accomplish a Process Review (PR) on each qualified technician. The QR is an internal inspection where a separate qualified technician re-accomplishes the calibration on a recently certified torque device prior to it leaving the calibration area and returning it to the

customer. The PR is an internal review where a separate qualified technician observes the overall process in action; including training/qualifications, documentation, calibration standard status, and technical data. The supervisor shall manage the internal Quality Program and maintain a log/record of all QRs/PRs. Supervision shall initial or sign the log/record when findings result in failure and initiate corrective action as necessary. The log/record must be maintained for a minimum of two years.

18.39.8. (Added) Provide MDC to AFMETCAL every six months. MDC data from January through June is due to AFMETCAL by 31 July, and data from July through December is due by 31 January. Send the MDC electronically to: (**mailto:AFMETCAL.MDC@afmetcal.af.mil**).

18.39.9. (Added) Participate in AFMETCAL Det 1's Proficiency Testing. Testing shall consist of performing measurements on an artifact provided by the Air Force Primary Standards Laboratory (AFPSL) by applying the same calibration methods used to calibrate their own torque devices. Frequency of proficiency testing at each site shall be determined at the discretion of AFMETCAL Det 1 (from zero to two times annually). AFMETCAL Det 1 shall notify the units in advance and shall provide specific instructions as to how to conduct the testing, report results and shipping of the artifact.

18.39.10. (Added) Torque Calibration Sites shall be subject to random evaluations by AFMETCAL Det 1.

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFMAN 10-206/ANG Sup 1, *Operational Reporting*

AFI 11-206, *General Flight Rules*

ANGI 10-401, *Air National Guard Unit Type Code Management*

ANGI 21-105, *Corrosion Control, Nondestructive inspection, and Oil Analysis Programs*

ANGPAM 21-103, *Maintenance Data Systems Analysis Guide*

TO 00-20-5-1-1*, Engine Historical Records F-100-PW-100/200/220 Engines.*

TO 00-25-113, *Conservation and Segregation of Critical Alloys and Precious Metal Bearing Parts and Scrap*

TO 00-85-20, *Engine Shipping Instructions*

TO 11A-1-10, *General Instruction-Munitions Serviceability Procedures*

TO 2J-1-18, *Preparation for Shipment and Storage of Gas Turbine Engines*

Abbreviations and Acronyms

ACW—Air Control Wing

AFPSL—Air Force Primary Standards Laboratory

AIS—Avionics Intermediate Shop

ALMS—Automated Logistics Management System

AMF—Aircraft Maintenance Flight

ANGRC—Air National Guard Readiness Center

ATS—Automated Training Management Sub-System

BDT—Bureau Directed Travel

C&SRL—Compliance and Standardization Requirements Lists

CANN—Cannibalization

CAD—Cartridge Actuated Device

CAF—Combat Air Forces

CEM—Chief Enlisted Manager

CIRF—Centralized Intermediate Repair Facilities

CMS—Calibration Measurement summaries

COMPES—Contingency Operations/Mobility Planning and Execution System

CONR—Continental United States NORAD

CRF—Component Repair Flight

CSM—Computer Systems Manager

CSR—Customer Service Representative

CTOCU—Central Technical Order Control Unit

DAD—Detached Alert Detachment

DETCO—Detachment Commander

DLR—Depot Level Repairables

DMC—Defense Mega Center

EAL—Entry Authorization List

EDW—Enterprise Data Warehouse

EMF—Equipment Maintenance Flight

EW—Electronic Warfare

FAX—Facsimile

FG—Force Generation

FSA—Functional Server Administrator

FW—Fighter Wing

GE—General Electric

GCS—Guidance Control System

HMMP—Hazardous Material Management Process

IATS—Intermediate Automated Test Station

IMT—Information Management Tools

JEDMICS—Joint Engineering Data Management Information and Control System

LEP—List of Effective Pages

LOGMOD—Logistics Module

LTERM—Logical Terminal

LM—Lockheed Martin

M/C—Munitions Control

MAF—Mobility Air Forces

MC2K—Munitions Control 2000

MCD —Magnetic Chip Detectors

MCDP—Magnetic Chip Detector Analysis Program

MDD—Maintenance Data Documentation

MSAT—Maintenance Scheduling Application Tool

MSE—Maintenance Standardization Evaluation

MSE—Maintenance Scheduling Effectiveness

MXG—Maintenance Group

N/A—Not Applicable

NCO—Non-Commissioned Officer

NFTBU—Nestable Fuel Tank Build Up

NORAD—North American Aerospace Defense (NORAD)

OCR—Office of Collateral Responsibility

PAA—Primary Aerospace Vehicle (Aircraft) Authorized

PAD—Primary Actuated Device

P2—Pollution Prevention

PAFSC—Primary AFSC

PR—Process Review

Pro Super—Production Supervisor

QPL—Qualified Products Listing

QR—Quality Review

QuAD—Quality Assurance Database

RH—Relative Humidity

RNRIU—Ruggedized Nuclear Remote Interface Units

SEM/EDX—Scanning Electron Microscope/Energy Dispersive X-Ray

SFO—Simulated Flameout

SMO—Squadron Maintenance Officer

SPOC—Single Point of Contact

STU—Secure Telephone Unit

T/A—Transient Alert

T/E/C—Trainer/Evaluator/Certifier

TIM—Technical Interchange Meeting

TOPS—Technical Order Page Supplements

UAE—United Arab Emirates

UEC—Unit Environmental Coordinator

UGT—Upgrade Training

UPMR—Unit Personnel Manpower Roster

Terms

Missed Carded Item—A carded item that is either not complied with or was improperly completed.

DANIEL JAMES III, Lieutenant General, USAF
Director, Air National Guard